

CS33-32

Knit Underwear (Exclusive of Rayon)

**U. S. DEPARTMENT OF COMMERCE
BUREAU OF STANDARDS**

**KNIT UNDERWEAR
(EXCLUSIVE OF RAYON)**

COMMERCIAL STANDARD CS33-32



**A RECORDED STANDARD
OF THE INDUSTRY**

Below are described some of the series of publications of the Department of Commerce which deal with various phases of waste elimination.

Simplified Practice Recommendations.

These present in detail the development of programs to eliminate unnecessary variety in sizes, dimensions, styles, and types of over 120 commodities. They also contain lists of associations and individuals who have indicated their intention to adhere to the recommendations. These simplified schedules, as formulated and approved by the industries, are indorsed by the Department of Commerce.

American Marine Standards.

These are promulgated by the American Marine Standards Committee, which is controlled by the marine industry and administered as a unit of the division of simplified practice. Their object is to promote economy in construction, equipment, maintenance, and operation of ships. In general, they provide for simplification and improvement of design, interchangeability of parts, and minimum requisites of quality for efficient and safe operation.

Commercial Standards.

These are developed by various industries under a procedure similar to that of simplified practice recommendations. They are, however, primarily concerned with considerations of grade, quality, and such other characteristics as are outside the scope of dimensional simplification.

Lists of the publications in each of the above series can be obtained by applying to the Bureau of Standards, Washington, D. C.

U. S. DEPARTMENT OF COMMERCE

R. P. LAMONT, Secretary

BUREAU OF STANDARDS

GEORGE K. BURGESS, Director

KNIT UNDERWEAR

(EXCLUSIVE OF RAYON)

COMMERCIAL STANDARD CS33-32

Effective Date for New Production January 1, 1932

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KNIT UNDERWEAR (EXCLUSIVE OF RAYON)

ACCEPTORS

ASSOCIATIONS

American Home Economics Association, Washington, D. C.
Associated Knit Underwear Manufacturers of America, Utica, N. Y.
National Retail Dry Goods Association, New York, N. Y.
Wholesale Dry Goods Institute, New York, N. Y. (in principle).

FIRMS

Atlas Underwear Co., The, Piqua, Ohio.
Ayres & Co., L. S., Indianapolis, Ind. (in principle).
Bassett Knitting Mill (Inc.), Bassetts, Va.
Bittner Hunsicker & Co., Allentown, Pa.
Bon Marche, The, Seattle, Wash.
Boston Knitting Mills (Inc.), Newton, Mass.
Cacoosing Knitting Co. (Inc.), Sinking Spring, Pa.
Capwell Co., The H. C., Oakland, Calif.
Certified Silk Service (Inc.), New York, N. Y. (in principle).
Clemson College, Textile Department, Clemson College, S. C. (in principle).
Cornell University, College of Home Economics, Ithaca, N. Y. (in principle).
Coopers (Inc.), Kenosha, Wis.
Dermophile Co., The, New York, N. Y.
Duofold Health Underwear Co., Mohawk, N. Y.
Edgerton (Inc.), Lillian, New York, N. Y. (in principle).
Emporium, The, San Francisco, Calif.
Fair, The, Chicago, Ill.
Fessler Knitting Co., H. H., Orwigsburg, Pa.
Fort Valley Knitting Mills, Fort Valley, Ga.
Giles & Hirsch (Inc.), New York, N. Y.
Girardville Knitting Mills, Girardville, Pa.
Globe Knitting Works, Grand Rapids, Mich.
Globe Underwear Co., Shoemakersville, Pa.
Glorie Underwear Mill (Inc.), Eufaula, Ala.
Goldenberg's (Inc.), Washington, D. C.
Goldheim's, Washington, D. C.
Halle Bros. Co., The, Cleveland, Ohio.
Hews, John T., New York, N. Y.
Hope Knitting Co., Cohoes, N. Y.
Hornik & Co., M., Charleston, S. C.
Hudson Co., The J. L., Detroit, Mich.
Hutzler Bros. Co., Baltimore, Md.
Innes, Henderson & Co. (Ltd.), Hawick, Scotland.
Jacquin & Co., H., New York, N. Y.

Kansas State Teachers College, Pittsburg, Kans. (in principle).
Kayser & Co., Julius, New York, N. Y. (in principle).
Klein Underwear Co., Boston, Mass.
Lord & Taylor, New York, N. Y.
Lumb Knitting Co., Pawtucket, R. I.
MacGlashan, W. G., New York, N. Y.
McCrory Co., J. G., New York, N. Y.
Mechanicville Knitting Co., Mechanicville, N. Y.
Miami Valley Knitting Mills Co., Hamilton, Ohio.
Miller Co., Robert P., Shoemakersville, Pa.
Moseley & Co. (Inc.), Needham Heights, Mass.
National Bellas Hess Co. (Inc.), New York, N. Y.
National Garment Co. (Inc.), Chaffee, Mo.
Nazareth Waist Co., Nazareth, Pa.
Nuback Underwear Co., Kansas City, Mo.
Pannill Knitting Co., Martinsville, Va.
Parsons & Baker Co., The, Phoenixville, Pa.
Pottstown Knitting Mills (Inc.), Pottstown, Pa.
Queen City Knitting Mills (Inc.), Elmira Heights, N. Y.
Reidler Knitting Mill, Hazleton, Pa.
Rubens & Marble, (Inc.), Chicago, Ill.
Russell Manufacturing Co. (Inc.), The, Alexander City, Ala.
Salt Lake Knitting Works, Salt Lake City, Utah.
Schudson (Inc.), Chas., Milwaukee, Wis.
Sel-Mor Garment Co., St. Louis, Mo.
Sexton Manufacturing Co., Fairfield, Ill.
Siff, Samuel, New York, N. Y.
Taylor Bramley Co. (Inc.), The, Chicopee Falls, Mass.
Union Knitting Co., St. Johnsville, N. Y.
Union Knitting Mills, New York, N. Y.
Utica Knitting Co., Utica, N. Y.
Walnott Knitting Co., Utica, N. Y.
Warren Soule Fairhurst Co., Tacoma, Wash.
West Coast Knitting Mills, Los Angeles, Calif.
Wieboldt Stores (Inc.), Chicago, Ill.
World's Star Knitting Co., Bay City, Mich.
Wright's Underwear Co., New York, N. Y.

GOVERNMENT

Department of Agriculture, Bureau of Home Economics, Washington, D. C.
Treasury Department, Washington, D. C.

KNIT UNDERWEAR (EXCLUSIVE OF RAYON)

COMMERCIAL STANDARD, CS33-32

On February 19, 1931, a general conference of representative manufacturers, distributors, and users of knit underwear (exclusive of rayon) adopted a commercial standard for this commodity. The industry has since accepted and approved for promulgation by the Department of Commerce through the Bureau of Standards, the commercial standard as described herein.

The standard became effective for new production January 1, 1932.
Promulgation recommended.

Promulgated.

I. J. FAIRCHILD,
Chief Division of Trade Standards.

APPROVED.

GEORGE K. BURGESS,
Director Bureau of Standards.

R. P. LAMONT,
Secretary of Commerce.

GENERAL

1. *Purpose.*—The purpose is to provide standard methods of measurement and standard measurements for knit underwear (exclusive of rayon) for the guidance of producers, distributors, and users in order to eliminate confusion resulting from a diversity of measurements and methods and to provide a uniform basis for guaranteeing full size. It includes recommendations for standard box sizes, standard cone colors, and washing methods.

2. *Application.*—The methods and measurements given herein are applicable to finished garments as delivered by the manufacturer.

METHOD OF MEASURING—GENERAL

3. The garment to be measured is laid out without tension on a smooth flat surface so that creases and wrinkles will not affect the measurements. A steel tape is recommended as being more convenient and accurate than other ordinary measuring devices.

4. *Accuracy.*—Measurements are taken to the nearest eighth of an inch.

MEN'S, BOY'S, AND CHILDREN'S RIBBED AND FLAT KNT UNION SUITS

5. *Total length.*—From point where shoulder joins collarett to outside bottom edge of leg cuff. (From A to B fig. 1.)

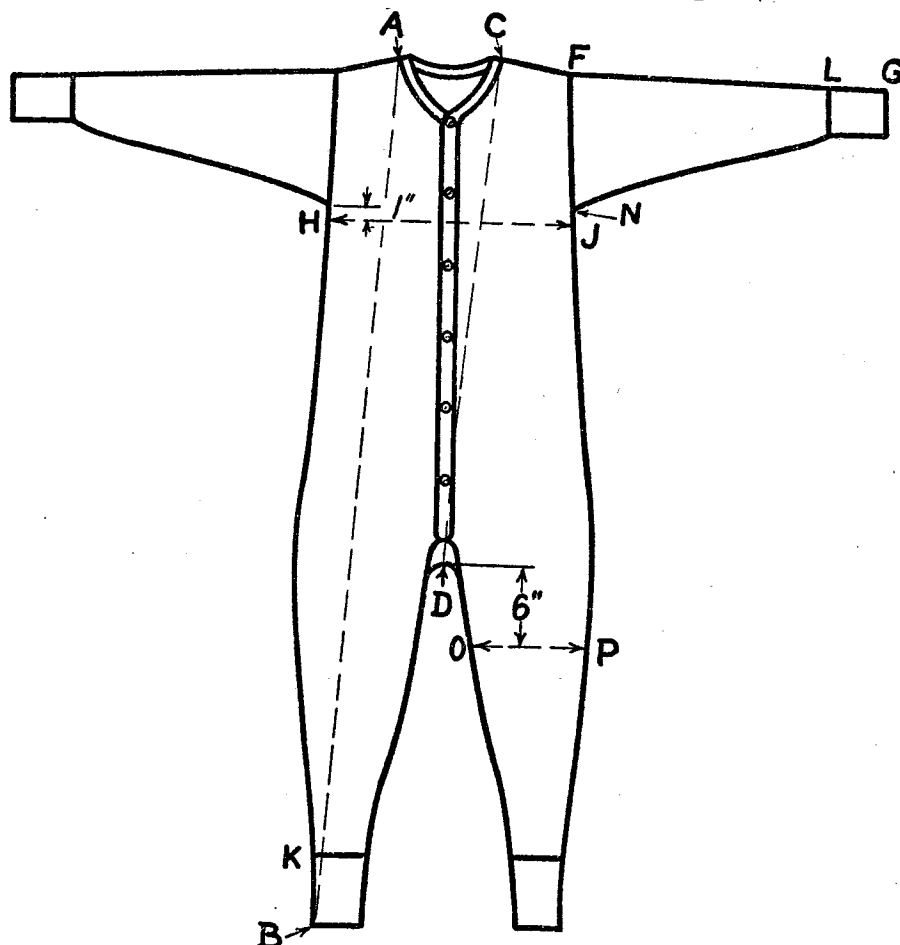


FIGURE 1.—Men's, boys', and children's union suits, ankle length and three-quarter length, high neck, long sleeves

6. *Trunk*.—Twice the distance from point where shoulder joins collarette to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch gusset. (Twice *C* to *D*, fig. 1.)

7. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve cuff. (From *F* to *G*, fig. 1.)

8. *Armhole length*.—Measured from point where sleeve is attached to shoulder to lowest point under the arm. (From *F* to *N*, fig. 1.)

9. *Width of garment*.—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 1.)

10. *Leg cuff length*.—Measured from middle of seam attaching cuff to leg to outside bottom edge of cuff. (From *K* to *B*, fig. 1.)

11. *Width of leg*.—Measured across leg of suit 6 inches below point *D*, Figure 1, and must equal one-half width of garment within tolerance of one-half inch plus or minus. (From *O* to *P*, fig. 1.)

12. *Sleeve cuff length*.—Measured from middle of seam attaching cuff to sleeve to upper outside edge of cuff. (From *L* to *G*, fig. 1.)

13. *Collarette length*.—Distance from center of collarette button around lower edge of collarette to end of buttonhole. (From *X* to *Y*, fig. 2.)



FIGURE 2.—Collarettes
for all types

MEN'S, BOYS', AND CHILDREN'S RIBBED AND FLAT KNIT SHIRTS

14. *Shirt length*.—Measured from a point where shoulder joins collarette to bottom edge of shirt. (From *A* to *B*, fig. 3.)

15. *Width of garment*.—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 3.)

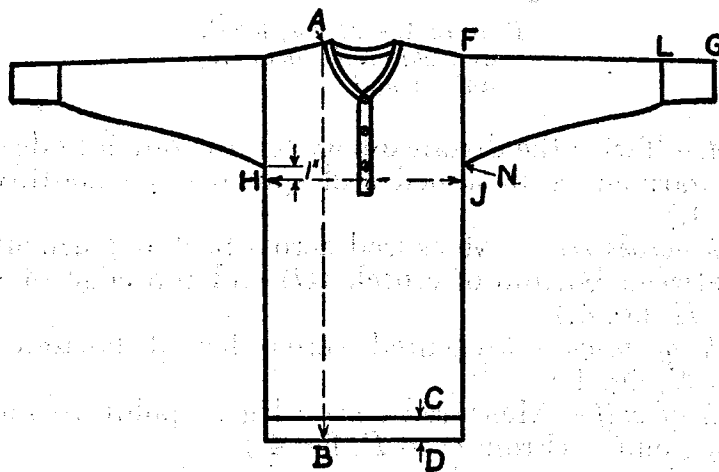


FIGURE 3.—Men's, boys', and children's shirts, high
neck, long sleeves, button chest

16. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve cuff. (From *F* to *G*, fig. 3.)

17. *Armhole length*.—Measured from the point where sleeve is attached to shoulder to lowest point under arm. (From *F* to *N*, fig. 3.)

18. *Sleeve cuff length*.—Measured from middle of seam attaching cuff to sleeve to upper outside edge of cuff. (From *L* to *G*, fig. 3.)

19. *Neck opening*.—Measured from center of button around lower edge of neck opening to end of buttonhole. (From *X* to *Y*, fig. 2.)

20. *Border rib length*.—Measured from middle of seam (for flat knit wool and wool mixed shirt only), attaching rib to edge of shirt to bottom edge of border rib. (From *C* to *D*, fig. 3.)

MEN'S, BOYS', AND CHILDREN'S RIBBED AND FLAT KNIT DRAWERS

21. *Total length*.—Measured from outside edge of waistband to outside lower edge of leg cuff. (From *A* to *B*, fig. 4.)

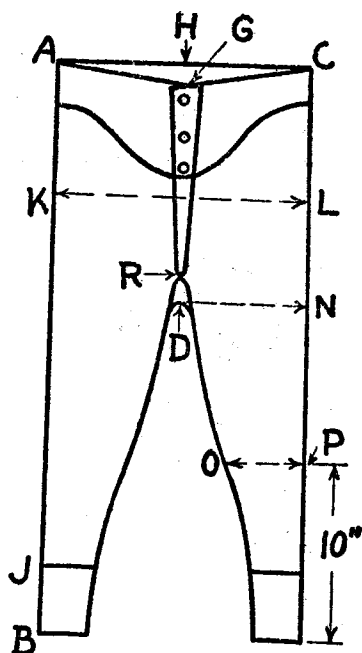


FIGURE 4.—Men's, boys', and children's drawers, ankle length

22. *Waist*.—Twice the distance between the outside edges of waistband when garment is buttoned and spread out smoothly. (Twice *A* to *C*, fig. 4.)

23. *Width across seat*.—Measured across back of garment at a point half-way between bottom of crotch (*D*) and top edge of waistband. (From *L* to *K*, fig. 4.)

24. *Width of thigh*.—Measured across leg at bottom of crotch. (From *D* to *N*, fig. 4.)

25. *Width of calf*.—Measured across leg at point 10 inches above bottom of leg cuff. (From *O* to *P*, fig. 4.)

26. *Front rise*.—Measured from crotch up front of garment, buttoned and spread out, to center of front edge of waistband. (From *D* to *G*, fig. 4.)

27. *Back rise*.—Measured from crotch up back of garment to middle point of back edge of waistband. (From *D* to *H*, fig. 4.)

28. *Front opening*.—Measured from bottom point of opening at fastening to top edge of waistband, garment buttoned. (From *R* to *G*, fig. 4.)

29. *Leg cuff length*.—Measured from middle of seam attaching cuff to leg to outside bottom edge of cuff. (From *J* to *B*, fig. 4.)

INFANTS' BANDS AND SHIRTS

INFANTS' BANDS

30. *Total length*.—Measured from center of shoulder straps to lower edge of garment. (From *A* to *B*, fig. 5.)

31. *Width of garment*.—Measured across garment 1 inch below armholes. (From *C* to *D*, fig. 5.)

32. *Width of shoulder strap*.—Measured across strap. (From *E* to *F*, fig. 5.)

33. *Length of shoulder strap*.—Measured from point where shoulder strap joins body of garment to top edge of strap. (From *G* to *H*, fig. 5.)

34. *Circumference of armhole*.—Measured around armhole. (From *I* to *J*, fig. 5.)

35. *Circumference of neck opening*.—Measured around neck opening. (Fig. 5.)

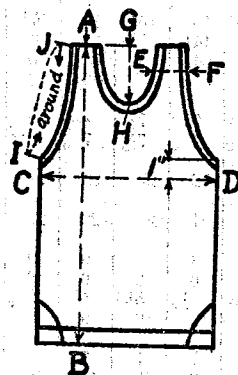


FIGURE 5.—Infants' bands

INFANTS' SHIRTS

36. *Total length*.—Measured from point where top of shoulder joins neck opening to bottom edge of garment. (From *A* to *B*, figs. 6 and 7.)

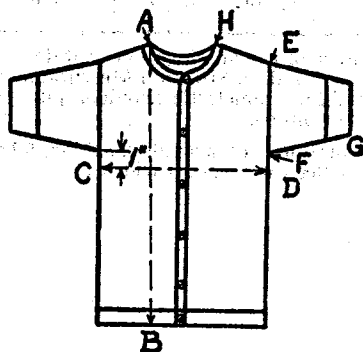


FIGURE 6.—Infants' shirts, high neck, short sleeve, button front

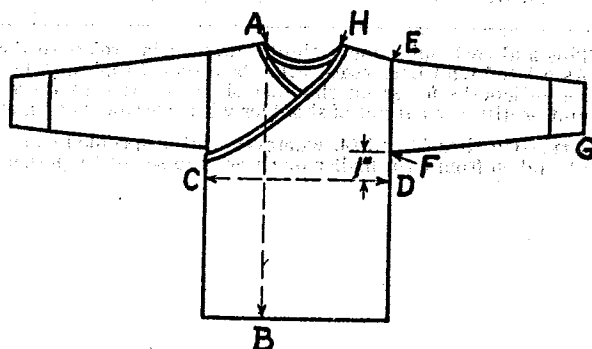


FIGURE 7.—Infants' shirts, high neck, long sleeve, double breasted

37. *Width of garment*.—Measured across buttoned garment 1 inch below armholes. (From *C* to *D*, figs. 6 and 7.)

38. *Armhole length*.—Measured from point where sleeve is attached to shoulder to lowest point under arm. (From *E* to *F*, figs. 6 and 7.)

39. *Sleeve length (long or short sleeves)*.—Measured from point under arm where sleeve is seamed to garment to lower outer edge of sleeve. (From *F* to *G*, figs. 6 and 7.)

40. *Circumference of neck opening*.—Measured from point where top of shoulder joins neck opening around opening and back to starting point, garment buttoned. (From *A* to *H* and around back to *A*, figs. 6 and 7.)

STANDARD MEASUREMENTS AND METHODS IN DETAIL

TABLE 1.—Standard measurements for men's ribbed (1 by 1) cotton union suits (bleached fabric)

(A. K. U. M. A. No. 1) ¹

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment, ribbed suits:												
7, 8, 9, 10 cut.....	13½	14¼	15	15¾	16½	17¼	18	18¾	19½	20¼	21	6 per cent.
11, 12, 14 cut.....	13	13¾	14½	15¼	16¼	17¼	18	18½	19½	20¼	21	Do.
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
Total length (ankle-length suit).....	56	57	58	59	60½	62	63	64	65	66	67	2½ inches.
Width of leg:												
7, 8, 9, 10 cut.....	6¾	7½	7½	7¾	8¼	8½	9	9½	9¾	10½	10½	½ inch.
11, 12, 14 cut.....	6½	6¾	7¼	7½	7¾	8¼	8½	9	9¼	9½	9¾	Do.
Sleeve length:												
For military nonelastic shoulder. ²	22	22	22	23	23	23	23	24	24	24	24	1 inch.
For lap seam elastic shoulder.	21	21	21	22	22	22	22	23	23	23	23	Do.
Armhole length.....	8	8	8	9	9	9	9	10	10	10	10	Do.
Leg cuff length.....	6	6	6	6	6	6	6	6	6	6	6	Maximum.
Sleeve cuff length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Collarete length (military high neck).	18	18	19	19	19	20	20	20	21	21	21	1 inch.
Quarter sleeve length.....	7	7	7	7	7	7	7	7	7	7	7	1½ inches.
Length knee-length suit.....	40	41	43	43	44½	46	47	48	49	50	51	2½ inches.
Length ¾-length suit.....	53	54	55	56	57	58	59	60	61	62	63	Do.
Men's "stouts":												
(a) Total length.....	53	54	55	56	57	58	59	60	61	62	63	Do.
(b) Sleeve length—												
For military nonelastic shoulder.	19½	19½	19½	20½	20½	20½	20½	21½	21½	21½	21½	1 inch.
For lap seam elastic shoulder.	18½	18½	18½	19½	19½	19½	19½	20½	20½	20½	20½	Do.
(c) Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
(d) Width—												
7, 8, 9, 10 cut.....	14¼	15	15¾	16½	17¼	18	18¾	19½	20¼	21	21¾	6 per cent.
11, 12, 14 cut.....	13¾	14½	15¼	16¼	17¼	18	18½	19½	20¼	21	21¾	Do.

¹ This and each subsequent similar designation refers to the number of the specification contained in the Associated Knit Underwear Manufacturers of America's booklet on Standard Sizes and Measurements.

² Sleeve lengths for set-in shoulder shall be same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder with tolerances of 1 inch plus or minus.

NOTE.—On sizes 52 and 54, wherever widths specified can not be produced on a single machine, fabric is to be taken from two smaller machines and seamed together to produce the specified widths.

TABLE 2.—Standard measurements for men's flat knit cotton union suits (bleached fabric)

(A. K. U. M. A. No. 2)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment, flat knit suits (all gages).	17	18	19	20	21	22	23	24	25	26	27	6 per cent.
Trunk	60	62	64	66	68	70	72	74	76	78	80	2 inches.
Total length (ankle-length suit)	56	57	58	59	60½	62	63	64	65	66	67	2½ inches.
Width of leg (all gages)	8½	9	9½	10	10½	11	11½	12	12½	13	13½	½ inch.
Sleeve length: ¹												
For military nonelastic shoulder.	22	22	22	23	23	23	23	24	24	24	24	1 inch.
For lap-seam elastic shoulder.	21	21	21	22	22	22	22	23	23	23	23	Do.
For set-in shoulder.												
Armhole length.	8	8	8	9	9	9	9	10	10	10	10	Do.
Leg cuff length.	6	6	6	6	6	6	6	6	6	6	6	Maximum.
Sleeve cuff length.	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Collarette length (military high neck).	18	18	19	19	19	20	20	20	21	21	21	1 inch.
Quarter sleeve length.	7	7	7	7	7	7	7	7	7	7	7	1½ inches.
Length knee-length suit.	40	41	43	43	44½	46	47	48	49	50	51	2½ inches.
Length ¾-length suit.	53	54	55	56	57	58	59	60	61	62	63	Do.
Men's "stouts":												
(a) Total length.	53	54	55	56	57	58	59	60	61	62	63	Do.
(b) Sleeve length—												
For military non-elastic shoulder.	19½	19½	19½	20½	20½	20½	20½	21½	21½	21½	21½	1 inch.
For lap-seam elastic shoulder.	18½	18½	18½	19½	19½	19½	19½	20½	20½	20½	20½	Do.
(c) Trunk.	60	62	64	66	68	70	72	74	76	78	80	2 inches.
(d) Width (all gages).	18	19	20	21	22	23	24	25	26	27	28	6 per cent.

¹ Sleeve lengths for set-in shoulder shall be same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder with tolerances of 1 inch plus or minus.

NOTE.—On sizes 52 and 54 wherever widths specified can not be produced on a single machine, fabric is to be taken from two smaller machines and seamed together to produce the specified widths.

BUREAU OF STANDARDS

TABLE 3.—Standard measurements for men's ribbed (1 by 1) worsted, worsted-merino, wool, and wool-cotton union suits

(Made from fabric that has been washed in the roll and then cut and seamed)

(A. K. U. M. A. No. 3)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment, ribbed suits:												
7, 8, 9, 10 cut.....	13½	14¼	15	15¾	16½	17¼	18	18¾	19½	20¼	21	6 per cent.
11, 12, 14 cut.....	13	13¾	14½	15¼	15¾	16½	17¼	18	18¾	19½	19½	Do.
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
Total length (ankle-length suit)	56	57	58	59	60½	62	63	64	65	66	67	2½ inches.
Width of leg:												
7, 8, 9, 10 cut.....	6¾	7½	7½	7¾	8¼	8½	9	9¾	9¾	10½	10½	½ inch.
11, 12, 14 cut.....	6½	6¾	7¼	7¾	8¼	8¾	9	9¾	9¾	10½	10½	Do.
Sleeve length: ¹												
For military nonelastic shoulder.	22	22	22	23	23	23	23	24	24	24	24	1 inch
For lap-seam elastic shoulder.	21	21	21	22	22	22	22	23	23	23	23	Do.
Armhole length.....	8	8	8	9	9	9	9	10	10	10	10	Do.
Leg cuff length.....	6	6	6	6	6	6	6	6	6	6	6	Maximum.
Sleeve cuff length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Collarete length (military high neck).	18	18	19	19	19	20	20	20	21	21	21	1 inch.
Quarter sleeve length.....	7	7	7	7	7	7	7	7	7	7	7	1½ inches.
Length knee-length suit.....	40	41	43	43	44½	46	47	48	49	50	51	2½ inches.
Length ¾-length suit.....	53	54	55	56	57	58	59	60	61	62	63	Do.
Men "stouts":												
(a) Total length.....	53	54	55	56	57	58	59	60	61	62	63	Do.
(b) Sleeve length—												
For military non-elastic shoulder.	19½	19½	19½	20½	20½	20½	20½	21½	21½	21½	21½	1 inch.
For lap seam elastic shoulders.	18½	18½	18½	19½	19½	19½	19½	20½	20½	20½	20½	Do.
(c) Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
(d) Width—												
7, 8, 9, 10 cut.....	14¼	15	15¾	16½	17¼	18	18¾	19½	20¼	21	21¾	6 per cent.
11, 12, 14 cut.....	13¾	14½	15¼	15¾	16½	17¼	18	18¾	19	19½	20	Do.

¹ Sleeve lengths for set-in shoulder shall be same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder with tolerance of 1 inch plus or minus.

NOTE.—On sizes 52 and 54, wherever widths specified can not be produced on a single machine, fabric is to be taken from two smaller machines and seamed together to produce the specified widths.

TABLE 4.—Standard measurements for men's flat fleece union suits

(A. K. U. M. A. No. 19)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment (all gages)....	17	18	19	20	21	22	23	24	25	26	27	6 per cent.
Trunk.....	58	60	62	64	66	68	70	72	74	76	78	2 inches.
Total length (ankle).....	55	56	57	58	59	60	61	62	63	64	65	2½ inches.
Width of leg (all gages).....	8½	9	9½	10	10½	11	11½	12	12½	13	13½	½ inch.
Sleeve length.....	20	20	20	21	21	21	21	22	22	22	22	1 inch.
Armhole length.....	9	9	9	10	10	10	10	11	11	11	11	Do.
Leg cuff length.....	6	6	6	6	6	6	6	6	6	6	6	Maximum.
Sleeve cuff length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Collarete length.....	18	18	19	19	19	20	20	20	21	21	21	1 inch.

TABLE 5.—Standard measurements for men's ribbed (1 by 1) cotton union suits—no sleeves, three-quarter length, button front

(A. K. U. M. A. No. 23)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment: 7, 8, 9, 10 cut.....	13 $\frac{1}{2}$	14 $\frac{1}{4}$	15	15 $\frac{3}{4}$	16 $\frac{1}{2}$	17 $\frac{1}{4}$	18	18 $\frac{3}{4}$	19 $\frac{1}{2}$	20 $\frac{1}{4}$	21	6 per cent. Do. 2 inches. Do.
11, 12, 14 cut.....	13	13 $\frac{3}{4}$	14 $\frac{1}{2}$	15 $\frac{1}{4}$	15 $\frac{3}{4}$	16 $\frac{1}{2}$	17 $\frac{1}{4}$	18	18 $\frac{1}{2}$	19	19 $\frac{1}{4}$	
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	
Total length ($\frac{3}{4}$ length).....	53	54	55	56	57	58	59	60	61	62	63	$\frac{1}{2}$ inch. Do. 2 inches. Maximum. 2 inches.
Width of leg: 7, 8, 9, 10 cut.....	6 $\frac{3}{4}$	7 $\frac{1}{8}$	7 $\frac{1}{2}$	7 $\frac{3}{4}$	8 $\frac{1}{4}$	8 $\frac{5}{8}$	9	9 $\frac{3}{8}$	9 $\frac{3}{4}$	10 $\frac{1}{8}$	10 $\frac{1}{2}$	
11, 12, 14 cut.....	6 $\frac{1}{2}$	6 $\frac{7}{8}$	7 $\frac{1}{4}$	7 $\frac{5}{8}$	7 $\frac{3}{4}$	8 $\frac{1}{4}$	8 $\frac{5}{8}$	9	9 $\frac{1}{4}$	9 $\frac{3}{8}$	9 $\frac{3}{4}$	
Armhole length.....	12	12	13	13	14	14	15	15	16	16	16	2 inches.
Leg cuff length.....	6	6	6	6	6	6	6	6	6	6	6	
Collarette length, button front.....	20	20	21	21	21	22	22	22	23	23	23	

TABLE 6.—Standard measurements for men's ribbed (1 by 1) cotton union suits—low neck, no sleeves, three-quarter length, button shoulder

(A. K. U. M. A. No. 24)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment (all cuts).....	12 $\frac{1}{4}$	13	13 $\frac{3}{4}$	14 $\frac{1}{2}$	15	15 $\frac{3}{4}$	16 $\frac{1}{2}$	17 $\frac{1}{4}$	17 $\frac{3}{4}$	18 $\frac{1}{4}$	18 $\frac{3}{4}$	6 per cent. 2 inches. Do. $\frac{1}{2}$ inch. 2 inches. Maximum.
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	
Total length ($\frac{3}{4}$ length).....	53	54	55	56	57	58	59	60	61	62	63	
Width of leg (all cuts).....	6 $\frac{3}{8}$	6 $\frac{1}{2}$	6 $\frac{7}{8}$	7 $\frac{1}{4}$	7 $\frac{1}{2}$	7 $\frac{3}{8}$	8 $\frac{1}{4}$	8 $\frac{5}{8}$	8 $\frac{7}{8}$	9 $\frac{1}{8}$	9 $\frac{3}{8}$	2 inches.
Armhole length.....	12	12	13	13	14	14	15	15	16	16	16	
Leg cuff length.....	6	6	6	6	6	6	6	6	6	6	6	
Collarette length, button shoulder.....	26	26	27	27	28	28	28	29	29	29	29	2 inches.

MENS COTTON RIBBED KNIT ATHLETIC UNION SUITS, NO SLEEVES, BUTTON SHOULDER, SHORT LEG

METHOD OF MEASURING

41. *Width of garment*.—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 8.)

42. *Trunk*.—Twice the distance measured from point where shoulder joins collarette to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch gusset. (Twice *C* to *D*, fig. 8.)

43. *Total length*.—Measured from center of shoulder strap to bottom edge of leg. (From *A* to *B*, fig. 8.)

44. *Width across bottom of leg*.—Measured across leg along lower edge.

45. *Armhole length*.—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm. (From *F* to *N*, fig. 8.)

46. *Collarette length*.—Measured from point where shoulder joins collarette around inner edge of collarette back to starting point.

TABLE 7.—Standard measurements for men's cotton ribbed knit athletic union suits—no sleeves, button shoulder, short leg

(A. K. U. M. A. No. 17)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment, ribbed suits.	12 $\frac{1}{4}$	13	13 $\frac{3}{4}$	14 $\frac{1}{2}$	15	15 $\frac{3}{4}$	16 $\frac{1}{2}$	17 $\frac{1}{4}$	17 $\frac{3}{4}$	18 $\frac{1}{4}$	18 $\frac{3}{4}$	6 per cent.
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
Total length.....	38	39	40	41	42	43	44	45	46	47	48	2 $\frac{1}{2}$ inches.
Width across leg bottom.....	6 $\frac{1}{2}$	7	7 $\frac{1}{2}$	8	8 $\frac{1}{2}$	9	9 $\frac{1}{2}$	10	10 $\frac{1}{2}$	11	11 $\frac{1}{2}$	6 per cent.
Armhole length.....	12	12	13	13	14	14	15	15	16	16	16	2 inches.
Collarette length.....	26	26	27	27	28	28	28	29	29	29	29	Do.

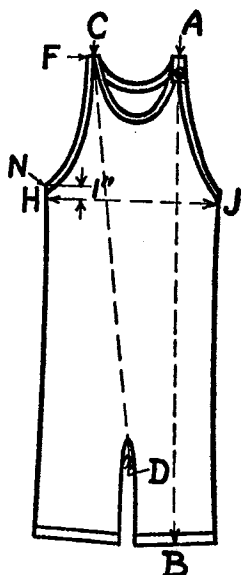


FIGURE 8.—Men's athletic union suits, no sleeves, button shoulder, short leg

MEN'S COTTON FLAT KNIT ATHLETIC UNION SUITS—NO SLEEVES, BUTTON SHOULDER, SHORT LEG

METHOD OF MEASURING

47. *Width of garment.*—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 8.)

48. *Trunk.*—Twice the distance measured from point where shoulder joins collarette to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch gusset. (Twice *C* to *D*, fig. 8.)

49. *Total length.*—Measured from center of shoulder strap to bottom edge of leg. (From *A* to *B*, fig. 8.)

50. *Width across bottom of leg.*—Measured across leg along lower edge.

51. *Armhole length.*—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm. (From *F* to *N*, fig. 8.)

52. *Collarette length.*—Measured from point where shoulder joins collarette around inner edge of collarette back to starting point.

TABLE 8.—Standard measurements for men's cotton flat knit athletic union suits—no sleeves, button shoulder, short leg

(A. K. U. M. A. No. 18)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment, flat suits.....	15	16	17	18	19	20	21	22	23	24	25	6 per cent.
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
Total length.....	38	39	40	41	42	43	44	45	46	47	48	2½ inches.
Width across leg bottom.....	9	9½	10	10½	11	11½	12	12½	13	13½	14	6 per cent.
Armhole length.....	12	12	13	13	14	14	15	15	16	16	16	2 inches.
Collarett length.....	26	26	27	27	28	28	28	29	29	29	29	Do.

TABLE 9.—Standard measurements for men's ribbed (1 by 1) cotton shirts

(A. K. U. M. A. No. 8)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment:												
8, 9, 10 cut.....	13½	14½	15	15½	16½	17½	18	18½	19½	20½	21	6 per cent.
11, 12, 14 cut.....	13	13½	14½	15½	16½	17½	18	18½	19	19½	20	Do.
Total length.....	31	31	32	33	34	34	35	35	36	36	36	1 inch.
Sleeve length: ¹												
For military nonelastic shoulder.....	22	22	22	23	23	23	24	24	24	24	24	Do.
For lap seam elastic shoulder.....	21	21	21	22	22	22	23	23	23	23	23	Do.
Armhole length.....	8	8	8	9	9	9	9	10	10	10	10	Do.
Sleeve cuff length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Maximum.
Collarett length (military high neck).....	18	18	19	19	19	20	20	20	21	21	21	1 inch.
Quarter sleeve length.....	7	7	7	7	7	7	7	7	7	7	7	1½ inches.

¹ Sleeve lengths for set-in shoulder shall be same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder with tolerance of 1 inch plus or minus.

NOTE.—On sizes 52 and 54, wherever widths specified can not be produced on a single machine, fabric is to be taken from two smaller machines and seamed together to produce the specified widths.

TABLE 10.—Standard measurements for men's flat knit cotton shirts

(A. K. U. M. A. No. 9)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment (all gages).....	17	18	19	20	21	22	23	24	25	26	27	6 per cent.
Total length.....	29	29	31	31	33	33	33	34	34	35	35	1 inch.
Sleeve length.....	21	21	21	22	22	22	22	23	23	23	23	Do.
Armhole length.....	8	8	8	9	9	9	9	10	10	10	10	Do.
Sleeve cuff length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Maximum.
Neck opening:												
Button front.....	16	16	17	17	17	18	18	18	19	19	19	1 inch.
Pull over.....	19	19	20	20	20	21	21	21	22	22	22	Do.
Quarter sleeve length.....	7	7	7	7	7	7	7	7	7	7	7	1½ inches.

NOTE.—On sizes 52 and 54, wherever widths specified can not be produced on a single machine, fabric is to be taken from two smaller machines and seamed together to produce the specified widths.

TABLE 11.—Standard measurements for men's flat knit wool and wool-cotton shirts—
for garments that are washed and fulled after seaming

(A. K. U. M. A. No. 10)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment (all gages)....	17	18	19	20	21	22	23	24	25	26	27	6 per cent.
Total length.....	32	32	33	33	33	34	34	35	35	36	36	1 inch.
Sleeve length.....	20	20	20	21	21	21	21	22	22	22	22	Do.
Armhole length.....	9	9	9	10	10	10	10	11	11	11	11	Do.
Sleeve cuff length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Maximum.
Border rib length.....	4	4	4	4	4	4	4	4	4	4	4	Do.
Collarett length:												
Button front.....	18	18	19	19	19	20	20	20	21	21	21	1 inch.
Pull over.....	19	19	20	20	20	21	21	21	22	22	22	Do.

NOTE.—On sizes 52 and 54, wherever widths specified can not be produced on a single machine, fabric is to be taken from two smaller machines and seamed together to produce the specified widths.

MEN'S KNIT ATHLETIC SHIRTS—PULL-OVER SHIRT, RIBBED, AND FLAT KNIT

METHOD OF MEASURING

53. *Shirt length*.—Measured from center of shoulder strap to bottom edge of shirt. (From *A* to *B*, fig. 9.)

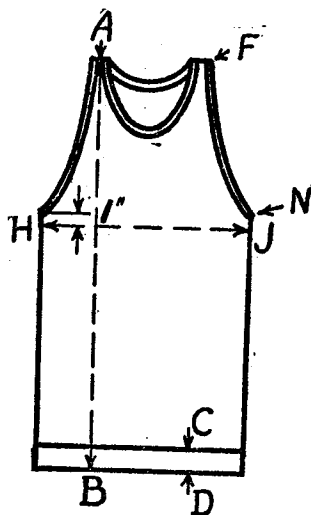


FIGURE 9.—Men's athletic pull-over shirt, low neck, no sleeve

54. *Width of garment*.—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 9.)

55. *Armhole length*.—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm. (From *F* to *G*, fig. 9.)

56. *Collarett length*.—Measured from point where shoulder joins collarett around inner edge of collarett back to starting point.

TABLE 12.—Standard measurements for men's knit athletic shirts—pull-over shirt—ribbed and flat knit

(A. K. U. M. A. No. 16)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment:												
Rib knit.....	11 $\frac{1}{4}$	12 $\frac{1}{2}$	13 $\frac{1}{4}$	14	14 $\frac{3}{4}$	15 $\frac{1}{2}$	16 $\frac{1}{4}$	17	17 $\frac{1}{2}$	18	18 $\frac{1}{2}$	6 per cent.
Flat knit.....	15	16	17	18	19	20	21	22	23	24	25	Do.
Total length:												
Rib knit.....	32	32	33	34	35	35	35	36	36	37	37	1 inch.
Flat knit.....	30	30	32	32	34	34	34	35	35	36	36	Do.
Armhole length.....	12	12	13	13	14	14	15	15	16	16	16	2 inches.
Collarete length.....	26	26	27	27	28	28	28	29	29	29	29	Do.

MEN'S SWISS RIBBED ATHLETIC SHIRTS—PULL OVER

METHOD OF MEASURING

57. *Shirt length*.—Measured from center of shoulder strap to bottom edge of shirt. (From *A* to *B*, fig. 9.)

58. *Width of garment*.—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 9.)

59. *Armhole length*.—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm (one-half length of armhole band). (From *F* to *N*, fig. 9.)

60. *Collarete length*.—Measured from point where shoulder joins collarete around inner edge of collarete back to starting point.

TABLE 13.—Standard measurements for men's swiss ribbed athletic shirts—pull over

(A. K. U. M. A. No. 32)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment (Swiss rib):												
12 cut.....	9	9	10	10	11	11	12	12	12	13	13	10 per cent.
14 cut.....	8	8	9	9	10	10	11	11	11	12	12	Do.
Total length.....	33	33	34 $\frac{1}{2}$	34 $\frac{1}{2}$	36	36	37	37	37	37	37	1 inch.
Armhole length.....	12	12	13	13	14	14	15	15	16	16	16	2 inches.
Collarete length.....	24	24	26	26	28	28	30	30	30	30	30	Do.

MEN'S KNITTED POLO SHIRTS

METHOD OF MEASURING

61. *Width of garment*.—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 10.)

62. *Total length*.—Measured from point where shoulder joins collar to bottom edge of shirt. (From *A* to *B*, fig. 10.)

63. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve cuff. (From *F* to *G*, fig. 10.)

64. *Armhole length*.—Measured from point where sleeve is attached to shoulder to lowest point under arm. (From *F* to *N*, fig. 10.)

65. *Collar length*.—Measured from center of collar button around neck band to end of buttonhole.

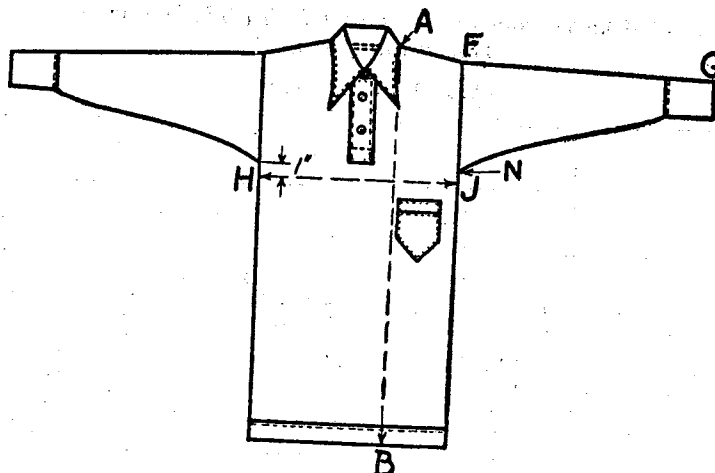


FIGURE 10.—Men's polo shirt

TABLE 14.—Standard measurements for men's ribbed (1 by 1) cotton polo shirts
(A. K. U. M. A. No. 34)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment, 12, 14 cut.....	13	13 $\frac{3}{4}$	14 $\frac{1}{2}$	15 $\frac{1}{4}$	16	16 $\frac{3}{4}$	17 $\frac{1}{2}$	18 $\frac{1}{4}$	18 $\frac{3}{4}$	19 $\frac{1}{4}$	19 $\frac{3}{4}$	6 per cent.
Total length.....	26	26	27	28	28	29	30	30	31	32	32	1 inch.
Sleeve length.....	22	22	22	23	23	23	23	24	24	24	24	Do.
Short sleeve.....	11	11	11	12	12	12	12	13	13	13	13	Do.
Armhole length.....	9	9	9 $\frac{1}{2}$	9 $\frac{1}{2}$	10	10	10 $\frac{1}{2}$	10 $\frac{1}{2}$	11	11	11 $\frac{1}{2}$	Do.
Collar length.....	14	14 $\frac{1}{2}$	15	15 $\frac{1}{2}$	16	16 $\frac{1}{2}$	17	17 $\frac{1}{2}$	18	18 $\frac{1}{2}$	19	Do.

TABLE 15.—Standard measurements for men's flat knit cotton and worsted-cotton polo shirts
(A. K. U. M. A. No. 34)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment.....	16	17	18	19	20	21	22	23	24	25	26	6 per cent.
Total length.....	26	26	27	28	28	29	30	30	31	32	32	1 inch.
Sleeve length.....	22	22	22	23	23	23	23	24	24	24	24	Do.
Short sleeve.....	11	11	11	12	12	12	12	13	13	13	13	Do.
Armhole length.....	9	9	9 $\frac{1}{2}$	9 $\frac{1}{2}$	10	10	10 $\frac{1}{2}$	10 $\frac{1}{2}$	11	11	11 $\frac{1}{2}$	Do.
Collar length.....	14	14 $\frac{1}{2}$	15	15 $\frac{1}{2}$	16	16 $\frac{1}{2}$	17	17 $\frac{1}{2}$	18	18 $\frac{1}{2}$	19	Do.

TABLE 16.—Standard measurements for men's flat knit wool-cotton polo shirts.
(A. K. U. M. A. No. 34)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment.....	16	17	18	19	20	21	22	23	24	25	26	6 per cent.
Total length.....	27	27	28	28	29	29	30	30	31	32	32	1 inch.
Sleeve length.....	22	22	22	23	23	23	23	24	24	24	24	Do.
Short sleeve.....	11	11	11	12	12	12	12	13	13	13	13	Do.
Armhole length.....	9	9	9 $\frac{1}{2}$	9 $\frac{1}{2}$	10	10	10 $\frac{1}{2}$	10 $\frac{1}{2}$	11	11	11 $\frac{1}{2}$	Do.
Collar length.....	14	14 $\frac{1}{2}$	15	15 $\frac{1}{2}$	16	16 $\frac{1}{2}$	17	17 $\frac{1}{2}$	18	18 $\frac{1}{2}$	19	Do.

(A. K. U. M. A. No. 34)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment.....	16	17	18	19	20	21	22	23	24	25	26	6 per cent. 1 inch. Do. Do. Do. Do.
Total length.....	28	28	29	29	30	30	31	31	32	33	33	
Sleeve length.....	22	22	22	23	23	23	23	24	24	24	24	
Short sleeve.....	11	11	11	12	12	12	12	13	13	13	13	
Armhole length.....	9	9	9½	9½	10	10	10½	10½	11	11	11½	
Collar length.....	14	14½	15	15½	16	16½	17	17½	18	18½	19	

(Made from fabric that has been washed in the roll and then cut and seamed)

(A. K. U. M. A. No. 8A)

Location	Size (inches)											Tolerances (plus or minus)
	30	32	34	36	38	40	42	44	46	48	50	
Total length	39	39 $\frac{3}{4}$	40 $\frac{1}{4}$	41 $\frac{1}{4}$	42	42 $\frac{3}{4}$	43 $\frac{1}{2}$	44	44 $\frac{1}{2}$	45	45 $\frac{1}{2}$	1 inch.
Waist	30	32	34	36	38	40	42	44	46	48	50	Do.
Front rise	13 $\frac{3}{4}$	14	14 $\frac{1}{4}$	14 $\frac{1}{2}$	14 $\frac{3}{4}$	15	15 $\frac{1}{4}$	15 $\frac{1}{2}$	16	16 $\frac{1}{2}$	17	$\frac{3}{4}$ inch.
Back rise	15 $\frac{1}{2}$	15 $\frac{3}{4}$	16	16 $\frac{1}{2}$	16 $\frac{3}{4}$	17	17 $\frac{1}{2}$	17 $\frac{3}{4}$	18	18 $\frac{1}{4}$	18 $\frac{1}{2}$	Do.
Width across seat	14	14 $\frac{1}{2}$	15 $\frac{1}{2}$	16 $\frac{1}{2}$	17 $\frac{1}{2}$	18 $\frac{1}{2}$	19 $\frac{1}{4}$	20	20 $\frac{1}{2}$	21	21 $\frac{1}{2}$	Do.
Width of thigh	7 $\frac{3}{4}$	8	8 $\frac{1}{2}$	9	9 $\frac{1}{2}$	10	10 $\frac{1}{4}$	10 $\frac{3}{4}$	11	11 $\frac{1}{4}$	11 $\frac{1}{2}$	1 inch.
Width of calf	5	5 $\frac{1}{4}$	5 $\frac{1}{2}$	5 $\frac{3}{4}$	5 $\frac{3}{4}$	5 $\frac{3}{4}$	6	6 $\frac{1}{4}$	6 $\frac{1}{4}$	6 $\frac{3}{8}$	6 $\frac{3}{8}$	6 per cent.
Length front opening	10	10 $\frac{1}{4}$	10 $\frac{1}{2}$	10 $\frac{3}{4}$	11	11 $\frac{1}{4}$	11 $\frac{1}{2}$	11 $\frac{3}{4}$	12	12 $\frac{1}{4}$	12 $\frac{1}{2}$	Do.
Drawer cuff length	6	6	6	6	6	6	6	6	6	6	6	$\frac{1}{2}$ inch. Maximum.

(Either made from fabric that has been washed in the roll and then cut and seamed or for garments that are washed and fullled after seaming)

(A. K. U. M. A. Nos. 9A and 10A)

[illegible]

TABLE 20.—Standard measurements for men's cotton knee-length drawers—ribbed, regular

(A. K. U. M. A. No. 30)

Location	Size (inches)											Tolerances (plus or minus)
	30	32	34	36	38	40	42	44	46	48	50	
Total length.....	23	23½	24	24½	25	25½	26	26½	27	27½	28	1 inch.
Waist.....	30	32	34	36	38	40	42	44	46	48	50	Do.
Front rise.....	13¾	14	14¼	14½	14¾	15	15¼	15½	16	16½	17	¾ inch.
Back rise.....	15½	15¾	16	16¼	16½	16¾	17	17¼	17½	17¾	18	Do.
Width across seat.....	14	14½	15½	16½	17½	18½	19¼	20	20½	21	21½	1 inch.
Width of thigh.....	7	7¼	7½	8¼	8½	9¼	9½	10	10½	10¾	10¾	½ inch.
Length front opening.....	10	10¼	10½	10¾	11	11¼	11½	11¾	12	12¼	12½	Do.

TABLE 21.—Standard measurements for men's cotton knee-length drawers—flat knit regular

(A. K. U. M. A. No. 30)

Location	Size (inches)											Tolerances (plus or minus)
	30	32	34	36	38	40	42	44	46	48	50	
Total length.....	22	22½	23	23½	24	24½	25	25½	26	26½	27	1 inch.
Waist.....	30	32	34	36	38	40	42	44	46	48	50	Do.
Front rise.....	13¾	14	14¼	14½	14¾	15	15¼	15½	16	16½	17	¾ inch.
Back rise.....	15½	15¾	16	16¼	16½	16¾	17	17¼	17½	17¾	18	Do.
Width across seat.....	15½	16½	17½	18½	19½	20½	21½	22½	23½	24½	25½	1 inch.
Width of thigh.....	7¾	8¼	8¾	9¼	9¾	10¼	10¾	11¼	11¾	12¼	12¾	½ inch.
Length front opening.....	10	10¼	10½	10¾	11	11¼	11½	11¾	12	12¼	12½	Do.

MEN'S FLAT KNIT ATHLETIC "SHORTS"

METHOD OF MEASURING

66. *Total length*.—Measured from top outside edge of waist band to lower edge of leg. (From *A* to *B*, fig. 11.)

67. *Waist*.—Twice the distance between the outside edges of waist band when garment is buttoned (Twice *A* to *C*, fig. 11.)

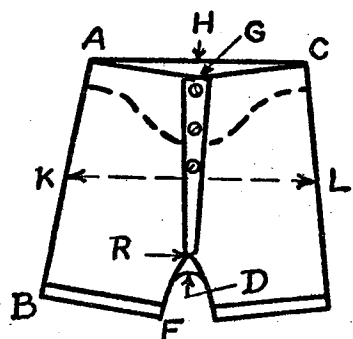


FIGURE 11.—Men's shorts

68. *Width across seat*.—Measured across back of garment at a point halfway between bottom of crotch and top edge of waist band. (From *K* to *L*, fig. 11.)

69. *Width across bottom of leg*.—Measured across leg along lower edge. (From *B* to *F*, fig. 11.)

70. *Front rise*.—Measured from bottom of crotch up front of buttoned garment to center of front edge of waist band. (From *D* to *G*, fig. 11.)

71. *Back rise*.—Measured from bottom of crotch up back of garment to middle point of back edge of waist band. (From *D* to *H*, fig. 11.)

72. *Front opening*.—Measured from bottom point of opening to top edge of waist band, garment buttoned. (From *G* to *R*, fig. 11.)

TABLE 22.—Standard measurements for men's flat knit athletic "shorts"

(A. K. U. M. A. No. 31)

Location	Size (inches)											Tolerances (plus or minus)
	30	32	34	36	38	40	42	44	46	48	50	
Total length.....	17	17½	18	18½	19	19½	20	20	21	22	22	1 inch.
Waist.....	30	32	34	36	38	40	42	44	46	48	50	Do.
Width across seat.....	16	17	18	19	20	21	22	23	23½	24	24½	Do.
Width across bottom of leg.....	10½	11	11½	12	12	12½	12½	13	13	13½	13½	¼ inch.
Front rise.....	12½	13	13½	13½	14	14½	14½	15	15	15½	15½	Do.
Back rise.....	13½	14	14½	14½	15	15½	15½	16	16	16½	16½	Do.
Length front opening.....	9	9	9½	10	10½	11	11½	12	12	12½	12½	¼ inch.

TABLE 23.—Standard measurements for boys' ribbed (1 by 1) cotton union suits

(A. K. U. M. A. No. 4)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment (ribbed suits):										
7, 8, 9, 10 cut.....	9¾	9¾	10½	10½	11¼	12	12¾	13½	14¼	6 per cent.
11, 12, 14 cut.....	9¾	9¾	10	10	10¾	11½	12¼	13	13¾	Do.
Trunk.....	38	41	44	47	50	53	56	59	61	1½ inches.
Total length (ankle length suit).....	30	33	37	41	45	49	52	55	57	Do.
Width of leg:										
7, 8, 9, 10 cut.....	4¾	4¾	5¼	5¼	5¾	6	6¾	6¾	7¼	½ inch.
11, 12, 14 cut.....	4¾	4¾	5	5	5¾	5¾	6½	6½	6¾	Do.
Sleeve length: ¹										
For military nonelastic shoulder.....	12	13	14	15	16	17½	19	20½	21	1 inch.
For lap seam elastic shoulder.....	11	12	13	14	15	16½	18	19½	20	Do.
Armhole length.....	5	5½	6	6	6½	7	7	7½	8	¼ inch.
Leg cuff length (if cuff is used).....	5	5	5	5	5	5	5	5	5	Maximum.
Sleeve cuff length (if cuff is used).....	4	4	4	4	4	4	4	4	4	Do.
Collarette length.....	14	14	15	15	15	16	16	17	18	1 inch.
Quarter sleeve length.....	5	5	5	5	6	6	6	6	6	1½ inches.
Length knee-length suit.....	23	24	27	29	31½	34	36	38	40	Do.

¹ Sleeve length for set in shoulder shall be same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder with tolerance of 1 inch plus or minus.

BUREAU OF STANDARDS

TABLE 24.—Standard measurements for boys' flat-knit cotton union suits

(A. K. U. M. A. No. 5)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment: Flat knit suits (all gages).....	10	11	12	13	14	15	16	17	18	6 per cent. 1½ inches. Do. ½ inch.
Trunk.....	38	41	44	47	50	53	56	59	61	
Total length (ankle-length suit).....	30	33	37	41	45	49	52	55	57	
Width of legs (all gages).....	5	5½	6	6½	7	7½	8	8½	9	1 inch. Do. ¾ inch. Maximum. Do. 1 inch. 1½ inches. Do.
Sleeve length: ¹ For military nonelastic shoulder.....	12	13	14	15	16	17½	19	20½	21	
For lap seam elastic shoulder.....	11	12	13	14	15	16½	18	19½	20	
Armhole length.....	5	5½	6	6	6½	7	7	7½	8	¾ inch. Maximum. Do. 1 inch. 1½ inches. Do.
Leg cuff length (if cuff is used).....	5	5	5	5	5	5	5	5	5	
Sleeve cuff length (if cuff is used).....	4	4	4	4	4	4	4	4	4	
Collarete length.....	14	14	15	15	15	16	16	17	18	1 inch. 1½ inches. Do.
Quarter sleeve length.....	5	5	5	5	6	6	6	6	6	
Length knee-length suit.....	23	25	27	29	31½	34	36	38	40	

¹ Sleeve lengths for set-in shoulder shall be same as those for military-nonelastic shoulder plus the amount or distance cut out of shoulder with tolerance of 1 inch plus or minus.

TABLE 25.—Standard measurements for boys' ribbed (1 by 1) worsted, worsted-merino, wool, and wool-cotton union suits

(Made from fabric that has been washed in the roll and then cut and seamed)

(A. K. U. M. A. No. 21)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment (ribbed suits):										6 per cent. Do. 1½ inches. Do.
7, 8, 9, 10 cut.....	9¾	9¾	10½	10½	11¼	12	12¾	13½	14¼	
11, 12, and 14 cut.....	9¼	9¼	10	10	10¾	11½	12¼	13	13¾	
Trunk.....	38	41	44	47	50	53	56	59	61	½ inch. Do.
Total length (ankle-length suit).....	30	33	37	41	45	49	52	55	57	
Width of leg:										
7, 8, 9, 10 cut.....	4⅞	4⅞	5¼	5¼	5⅝	6	6⅝	6¾	7⅞	1 inch. Do. ¾ inch. Maximum. Do. 1 inch. 1½ inches. Do.
11, 12, 14 cut.....	4⅝	4⅝	5	5	5⅝	5¾	6⅝	6½	6⅞	
Sleeve length: ¹										
For military-nonelastic shoulder.....	12	13	14	15	16	17½	19	20½	21	1 inch. Do.
For lap seam elastic shoulder.....	11	12	13	14	15	16½	18	19½	20	
Armhole length.....	5	5½	6	6	6½	7	7	7½	8	
Leg cuff length (if cuff is used).....	5	5	5	5	5	5	5	5	5	¾ inch. Maximum. Do.
Sleeve cuff length (if cuff is used).....	4	4	4	4	4	4	4	4	4	
Collarete length.....	14	14	15	15	15	16	16	17	18	
Quarter sleeve lengths.....	5	5	5	5	6	6	6	6	6	1 inch. 1½ inches. Do.
Length knee-length suit.....	23	25	27	29	31½	34	36	38	40	

¹ Sleeve lengths for set-in shoulder shall be same as those for military-nonelastic shoulder plus the amount or distance cut out of shoulder with tolerance of 1 inch plus or minus.

TABLE 26.—Standard measurements for boys' flat fleece union suits
(A. K. U. M. A. No. 20)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment (all gages):----	10	11	12	13	14	15	16	17	18	6 per cent.
Trunk-----	37	40	43	46	49	52	55	58	60	1½ inches.
Total length (ankle)-----	29	32	36	40	44	48	51	54	56	Do.
Width of leg (all gages)-----	5	5½	6	6½	7	7½	8	8½	9	½ inch.
Sleeve length-----	11	12	13	14	15	16	17	18	19	1 inch.
Armhole length-----	5½	6	6½	6½	7	7½	8	8	9	¾ inch.
Leg cuff length-----	5	5	5	5	5	5	5	5	5	Maximum.
Sleeve cuff length-----	4	4	4	4	4	4	4	4	4	Do.
Collarette length-----	14	14	15	15	15	16	16	17	18	1 inch.

BOYS' RIBBED KNIT ATHLETIC COTTON UNION SUITS—NO SLEEVES, BUTTON SHOULDER, SHORT LEG

METHOD OF MEASURING

73. *Width of garment.*—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 8.)

74. *Trunk.*—Twice the distance measured from point where shoulder joins collarette to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch gusset. (Twice *C* to *D*, fig. 8.)

75. *Total length.*—Measured from center of shoulder strap to bottom edge of leg. (From *A* to *B*, fig. 8.)

76. *Armhole length.*—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm. (One-half length of armhole band.) (From *F* to *N*, fig. 8.)

77. *Collarette length.*—Measured from point where shoulder joins collarette around inner edge of collarette back to starting point.

TABLE 27.—Standard measurements for boys' ribbed knit athletic cotton union suits—No sleeves, button shoulder, short leg

(A. K. U. M. A. No. 27)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment (ribbed suits) ..	9¼	9¼	10	10	10½	11	11½	12¼	13	6 per cent. 1½ inches. Do. ¾ inch. 2 inches.
Trunk.....	38	41	44	47	50	53	56	59	61	
Total length.....	21	23	25	27	29½	32	34	36	38	
Armhole length.....	7	7½	8	8½	9	9½	10	10½	11	
Collarette length.....	20	21	22	23	24	25	26	26	26	

BOYS' FLAT KNIT ATHLETIC COTTON UNION SUITS—NO SLEEVES, BUTTON SHOULDER, SHORT LEG

METHOD OF MEASURING

78. *Width of garment.*—Measured across garment 1 inch below bottom of the armholes. (From *H* to *J*, fig. 8.)

79. *Trunk.*—Twice the distance measured from point where shoulder joins collarette to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch gusset. (Twice *C* to *D*, fig. 8.)

80. *Total length.*—Measured from center of shoulder strap to bottom edge of leg. (From *A* to *B*, fig. 8.)

81. *Armhole length.*—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm. (One-half length of armhole band.) (From *F* to *N*, fig. 8.)

82. *Collarette length.*—Measured from point where shoulder joins collarette around inner edge of collarette back to starting point.

TABLE 28.—Standard measurements for boys' flat knit athletic cotton union suits—No sleeves, button shoulder, short leg

(A. K. U. M. A. No. 28)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment (flat suits).....	10	10	11	11	12	13	14	15	16	6 per cent.
Trunk.....	38	41	44	47	50	53	56	59	61	1½ inches.
Total length.....	21	23	25	27	29½	32	34	36	38	Do.
Armhole length.....	7	7½	8	8½	9	9½	10	10½	11	¾ inch.
Collarette length.....	20	21	22	23	24	25	26	26	26	2 inches.

TABLE 29.—Standard measurements for boys' ribbed (1 by 1) cotton shirts

(A. K. U. M. A. No. 11)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment: 7, 8, 9, 10 cut.....	9¾	9¾	10½	10½	11¼	12	12½	13¼	14	6 per cent. Do.
11, 12, 14 cut.....	9¼	9¼	10	10	10¾	11½	12	12¾	13½	
Total length.....	15	17	19	21	23½	25½	28	30	32	1 inch.
Sleeve length: 1										
Military nonelastic shoulder.....	12	13	14	15	16	17½	19	20½	21	Do.
Lap-seam elastic shoulder.....	11	12	13	14	15	16½	18	19½	20	Do.
Armhole length.....	5	5½	6	6	6½	7	7	7½	8	¾ inch.
Sleeve cuff length (if cuff is used).....	4	4	4	4	4	4	4	4	4	Maximum.
Collarette length.....	14	14	15	15	15	16	16	17	18	1 inch.
Quarter sleeve length.....	5	5	5	5	6	6	6	6	6	1½ inches.

¹ Sleeve lengths for set-in shoulder shall be same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder with tolerance of 1 inch plus or minus.

TABLE 30.—Standard measurements for boys' flat knit cotton shirts
(A. K. U. M. A. No. 12)

Location	Size (Inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment (all gages) -----	10	11	12	13	14	15	16	17	18	6 per cent. 1 inch. Do. Do. Maximum. 1 inch. 1½ inches.
Total length -----	14	16	18	20	22½	24½	27	29	31	
Sleeve length -----	11	12	13	14	15	16½	18	19½	20	
Armhole length -----	5	5½	6	6	6½	7	7	7½	8	
Sleeve cuff length (if cuff is used) -----	5	5	5	5	5	5	5	5	5	
Neck opening -----	13	13	14	14	14	15	15	15	16	
Quarter sleeve length -----	5	5	5	5	6	6	6	6	6	

TABLE 31.—Standard measurements for boys' flat knit wool and wool-cotton shirts
(A. K. U. M. A. No. 13)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment (all gages).....	10	11	12	13	14	15	16	17	18	6 per cent 1 inch. Do. Do. Maximum. 1 inch.
Total length.....	15	17	19	21	23½	25½	28	30	32	
Sleeve length.....	12	13	14	15	16	17½	19	20½	21	
Armhole length.....	5½	6	6½	6½	7	7½	8	8	9	
Sleeve cuff length (if cuff is used).....	5	5	5	5	5	5	5	5	5	
Neck opening.....	13	13	14	14	14	15	15	15	16	

BOYS' KNIT ATHLETIC SHIRTS, PULLOVER SHIRT—RIBBED AND FLAT KNIT
METHOD OF MEASURING

83. *Shirt length*.—Measured from center of shoulder strap to bottom edge of shirt. (From *A* to *B*, fig. 9.)

84. *Width of garment*.—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 9.)

85. *Armhole length*.—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm. (One-half length of armhole band.) (From *F* to *N*, fig. 9.)

86. *Collarett length*.—Measured from point where shoulder joins collarett around inner edge of collarett back to starting point.

[illegible]

TABLE 35.—Standard measurements for boys' flat knit wool and wool-cotton drawers

(A. K. U. M. A. No. 13)

Location	Age									Tolerances (plus or minus)
	2	4	6	8	10	12	14	16	18	
Total length.....	23	26	29	32	36	39	40	41	42	1 inch.
Waist.....	24	25	26	27	28	29	30	31	32	Do.
Front rise.....	9	9 $\frac{3}{4}$	10 $\frac{1}{2}$	11 $\frac{1}{4}$	12	12 $\frac{3}{4}$	13 $\frac{1}{2}$	14 $\frac{1}{4}$	15	$\frac{3}{4}$ inch.
Back rise.....	10	10 $\frac{3}{4}$	11 $\frac{1}{2}$	12 $\frac{1}{4}$	13	13 $\frac{3}{4}$	14 $\frac{1}{2}$	15 $\frac{1}{4}$	16	Do.
Width of thigh.....	5 $\frac{1}{2}$	5 $\frac{1}{2}$	6	6 $\frac{1}{2}$	7	7 $\frac{1}{2}$	8	8	8 $\frac{1}{2}$	$\frac{1}{2}$ inch.
Length front opening.....	8	8	8 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$	10	10	10 $\frac{1}{2}$	Do.
Drawer cuff length (if cuff is used).....	5	5	5	5	5	5	5	5	5	Maximum.

TABLE 36.—Standard measurements for children's ribbed (1 by 1) cotton union suits

(A. K. U. M. A. No. 6)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment (ribbed suits):										
7, 8, 9, 10 cut.....	9 $\frac{3}{4}$	9 $\frac{3}{4}$	10 $\frac{1}{2}$	10 $\frac{1}{2}$	11 $\frac{1}{4}$	12	12 $\frac{3}{4}$	13 $\frac{1}{2}$	14 $\frac{1}{4}$	6 per cent.
11, 12, 14 cut.....	9 $\frac{1}{4}$	9 $\frac{1}{4}$	10	10	10 $\frac{3}{4}$	11 $\frac{1}{2}$	12 $\frac{1}{4}$	13	13 $\frac{3}{4}$	Do.
Trunk.....	38	41	44	47	50	53	56	59	61	1 $\frac{1}{2}$ inches.
Total length (ankle length suit).....	29	32	36	40	44	48	51	54	56	Do.
Width of leg:										
7, 8, 9, 10 cut.....	4 $\frac{7}{8}$	4 $\frac{7}{8}$	5 $\frac{1}{4}$	5 $\frac{1}{4}$	5 $\frac{5}{8}$	6	6 $\frac{3}{8}$	6 $\frac{3}{4}$	7 $\frac{1}{8}$	$\frac{1}{2}$ inch.
11, 12, 14 cut.....	4 $\frac{5}{8}$	4 $\frac{5}{8}$	5	5	5 $\frac{3}{8}$	5 $\frac{3}{4}$	6 $\frac{1}{8}$	6 $\frac{1}{2}$	6 $\frac{5}{8}$	Do.
Sleeve length: ¹										
For military nonelastic shoulder.....	11	12	13	14	15	16 $\frac{1}{2}$	18	19 $\frac{1}{2}$	20	1 inch.
For lap seam elastic shoulder.....	10	11	12	13	14	15 $\frac{1}{2}$	17	18 $\frac{1}{2}$	19	Do.
Armhole length.....	5	5 $\frac{1}{2}$	6	6	6 $\frac{1}{2}$	7	7	7 $\frac{1}{2}$	8	$\frac{3}{4}$ inch.
Leg cuff length (if cuff is used).....	5	5	5	5	5	5	5	5	5	Maximum.
Sleeve cuff length (if cuff is used).....	4	4	4	4	4	4	4	4	4	Do.
Collarette length.....	14	14	15	15	15	16	16	17	18	1 inch.
Quarter sleeve lengths.....	5	5	5	5	6	6	6	6	6	1 $\frac{1}{2}$ inches.
Length knee-length suit.....	23	25	27	29	31 $\frac{1}{2}$	34	36	38	40	Do.

¹ Sleeve lengths for set-in shoulder shall be same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder with tolerance of 1 inch plus or minus.

TABLE 37.—*Standard measurements for children's flat knit cotton union suits*
(A. K. U. M. A. No. 7)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment, flat knit suits (all gages).....	10	11	12	13	14	15	16	17	18	6 per cent.
Trunk.....	38	41	44	47	50	53	56	59	61	
Total length (ankle-length suit).....	29	32	36	40	44	48	51	54	56	1½ inches.
Width of leg (all gages).....	5	5½	6	6½	7	7½	8	8½	9	Do.
Sleeve length: 1										½ inch.
For military nonelastic shoulder.....	11	12	13	14	15	16½	18	19½	20	1 inch
For lap seam elastic shoulder.....	10	11	12	13	14	15½	17	18½	19	Do.
Armhole length.....	5	5½	6	6	6½	7	7	7½	8	¾ inch.
Leg cuff length (if cuff is used).....	5	5	5	5	5	5	5	5	5	Maximum.
Sleeve cuff length (if cuff is used).....	4	4	4	4	4	4	4	4	4	Do.
Collarette length.....	14	14	15	15	15	16	16	17	18	1 inch.
Quarter sleeve lengths.....	5	5	5	5	6	6	6	6	6	1½ inches.
Length knee-length suit.....	23	25	27	29	31½	34	36	38	40	Do.

¹ Sleeve lengths for set-in shoulder shall be same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder with tolerance of 1 inch plus or minus.

TABLE 38.—*Standard measurements for children's and misses' ribbed worsted, worsted-merino, wool and wool-cotton union suits*

(Made from fabric that has been washed in the roll and then cut and seamed)

(A. K. U. M. A. No. 39)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment (ribbed suits):										
7, 8, 9, 10 cut	9¾	9¾	10½	10½	11¼	12	12¾	13½	14¼	6 per cent.
11, 12, 14 cut	9¾	9¾	10	10	10¾	11½	12¾	13	13¾	Do.
Trunk	38	41	44	47	50	53	56	59	61	1½ inches.
Total length (ankle-length suit)	29	32	36	40	44	48	51	54	56	Do.
Width of leg:										
7, 8, 9, 10 cut	4⅞	4⅞	5¼	5¼	5⅝	6	6⅜	6¾	7⅞	½ inch.
11, 12, 14 cut	4⅞	4⅞	5	5	5⅝	5¾	6⅜	6½	6⅞	Do.
Sleeve length: ¹										
For military nonelastic shoulder	11	12	13	14	15	16½	18	19½	20	1 inch.
For lap seam elastic shoulder	10	11	12	13	14	15½	17	18½	19	Do.
Armhole length	5	5½	6	6	6½	7	7	7½	8	¾ inch.
Leg cuff length (if cuff is used)	5	5	5	5	5	5	5	5	5	Maximum.
Sleeve cuff length (if cuff is used)	4	4	4	4	4	4	4	4	4	Do.
Collarette length	14	14	15	15	15	16	16	17	18	1 inch.
Quarter sleeve length	5	5	5	5	6	6	6	6	6	1½ inches.
Length knee-length suit	23	25	27	29	31½	34	36	38	40	Do.

¹ Sleeve lengths for set-in shoulder shall be same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder with tolerance of 1 inch plus or minus.

CHILDREN'S RIBBED (1 BY 1) COTTON VESTS—BUILT-UP SHOULDER

METHOD OF MEASURING

87. *Width of garment.*—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 12.)

88. *Total length*.—Measured from point where shoulder joins collarete or neck opening or from center of shoulder strap, if sleeveless garment, to bottom edge of vest. (From A to B, fig. 12.)

89. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve or of sleeve cuff if cuff is used. (From F to G, fig. 12.)

90. *Armhole length*.—For vests with sleeves, measured from point where sleeve is attached to shoulder to lowest point under arm. For sleeveless garment, measured from top point of shoulder at shoulder along outer edge of armhole to lowest point under arm. (F to N, fig. 12.)

91. *Sleeve cuff length (if cuff is used)*.—Measured from middle of seam attaching cuff to sleeve to upper outside edge of cuff. (From L to G, fig. 12.)

92. *Neck opening*.—For button chest garment, measured from center of collarete or neck opening button around inner edge of collarete or neck opening to end of button hole. If garment is pullover type, measured from point where shoulder joins collarete or neck opening around inner edge of collarete or neck opening back to starting point.

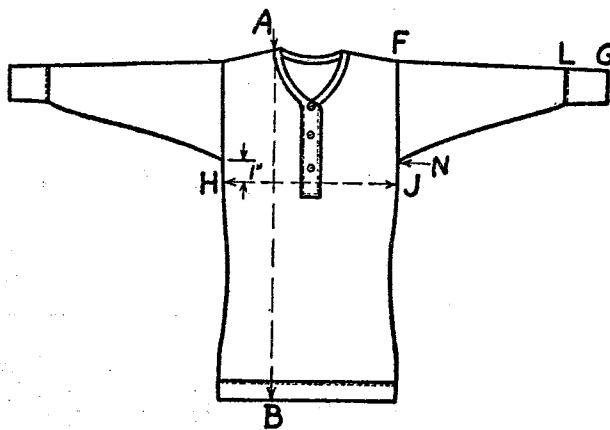


FIGURE 12.—Children's vest, high neck, long sleeve

TABLE 39.—Standard measurements for children's ribbed (1 by 1) cotton vests—
Built-up shoulders—High neck, long sleeve vest

(A. K. U. M. A. No. 35)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment: 7, 8, 9, 10 cut..... 11, 12, 14 cut.....	10 9½	10 9½	10¾ 10¾	10¾ 10¾	11¾ 11¾	11¾ 11¾	12¾ 12¾	12¾ 12¾	13¾ 13¾	6 per cent. Do. 1 inch. Do. ¾ inch. Maximum. 1 inch.
Total length.....	17½	18½	20½	22½	24½	26	27½	29	31	
Sleeve length.....	10	11	12	13	14	15½	17	18½	19	
Armhole length.....	5	5½	6	6	6½	6½	7	7	8	
Sleeve cuff length (if cuff is used).....	4	4	4	4	4	4	4	4	4	
Neck opening.....	14	14	15	15	15	16	16	17	18	

BUREAU OF STANDARDS

TABLE 40.—Standard measurements for children's ribbed (1 by 1) cotton vests—
Built-up shoulder—Dutch neck, elbow sleeve vest

(A. K. U. M. A. No. 35)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment: 7, 8, 9, 10 cut.....	10	10	10 $\frac{3}{4}$	10 $\frac{3}{4}$	11 $\frac{3}{4}$	11 $\frac{3}{4}$	12 $\frac{3}{4}$	12 $\frac{3}{4}$	13 $\frac{3}{4}$	6 per cent. Do. 1 inch. Do. $\frac{3}{4}$ inch. Maximum. 1 inch.
11, 12, 14 cut.....	9 $\frac{1}{2}$	9 $\frac{1}{2}$	10 $\frac{1}{4}$	10 $\frac{1}{4}$	11 $\frac{1}{4}$	11 $\frac{1}{4}$	12 $\frac{1}{4}$	12 $\frac{1}{4}$	13 $\frac{1}{4}$	
Total length.....	17 $\frac{1}{2}$	18 $\frac{1}{2}$	20 $\frac{1}{2}$	22 $\frac{1}{2}$	24 $\frac{1}{2}$	26	27 $\frac{1}{2}$	29	31	
Sleeve length.....	6	6	7	7	8	8	9	9	10	
Armhole length.....	5	5 $\frac{1}{2}$	6	6	6 $\frac{1}{2}$	6 $\frac{1}{2}$	7	7	8	
Sleeve cuff length (if cuff is used).....	4	4	4	4	4	4	4	4	4	
Neck opening.....	17	18	19	19	21	21	23	23	25	

TABLE 41.—Standard measurements for children's ribbed (1 by 1) cotton vests—
Built-up shoulder—Low neck, short sleeve vest

(A. K. U. M. A. No. 35)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment: 7, 8, 9, 10 cut.....	10	10	10 $\frac{3}{4}$	10 $\frac{3}{4}$	11 $\frac{3}{4}$	11 $\frac{3}{4}$	12 $\frac{3}{4}$	12 $\frac{3}{4}$	13 $\frac{3}{4}$	6 per cent. Do. 1 inch. Do. $\frac{3}{4}$ inch. Maximum. 2 inches.
11, 12, 14 cut.....	9 $\frac{1}{2}$	9 $\frac{1}{2}$	10 $\frac{1}{4}$	10 $\frac{1}{4}$	11 $\frac{1}{4}$	11 $\frac{1}{4}$	12 $\frac{1}{4}$	12 $\frac{1}{4}$	13 $\frac{1}{4}$	
Total length.....	17 $\frac{1}{2}$	18 $\frac{1}{2}$	20 $\frac{1}{2}$	22 $\frac{1}{2}$	24 $\frac{1}{2}$	26	27 $\frac{1}{2}$	29	31	
Sleeve length.....	4 $\frac{1}{2}$	4 $\frac{1}{2}$	5	5	5 $\frac{1}{2}$	5 $\frac{1}{2}$	6	6	6 $\frac{1}{2}$	
Armhole length.....	5 $\frac{1}{2}$	6	6 $\frac{1}{2}$	6 $\frac{1}{2}$	7	7	7 $\frac{1}{2}$	7 $\frac{1}{2}$	8 $\frac{1}{2}$	
Sleeve cuff length (if cuff is used).....	4	4	4	4	4	4	4	4	4	
Neck opening.....	27	28	29 $\frac{1}{2}$	31	32 $\frac{1}{2}$	34	35 $\frac{1}{2}$	37	38 $\frac{1}{2}$	

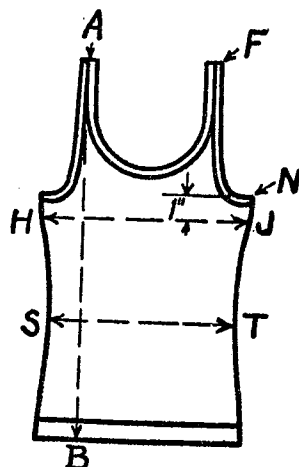
FIGURE 13.—Women's
and children's vest,
low neck, no sleeve

TABLE 42.—Standard measurements for children's ribbed (1 by 1) cotton vests—
Built-up shoulder—Low neck, no sleeve vest
(A. K. U. M. A. No. 35)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment: 7, 8, 9, 10 cut----- 11, 12, 14 cut-----	10 9½	10 9½	10¾ 10¾	10¾ 10¾	11¾ 11¾	11¾ 11¾	12¾ 12¾	12¾ 12¾	13¾ 13¾	6 per cent. Do.
Total length-----	17½	18½	20½	22½	24½	26	27½	29	31	1 inch.
Armhole length-----	6	6½	7	7	7½	7½	8	8	9	¾ inch.
Neck opening-----	27	28	29½	31	32½	34	35½	37	38½	2 inches.

CHILDREN'S FLAT KNIT COTTON VESTS—BUILT-UP SHOULDER

METHOD OF MEASURING

93. *Width of garment.*—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 12.)

94. *Total length.*—Measured from point where shoulder joins collarete or neck opening, or from center of shoulder strap, if sleeveless garment, to bottom edge of vest. (From *A* to *B*, fig. 12.)

95. *Sleeve length.*—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve or of sleeve cuff if cuff is used. (From *F* to *G*, fig. 12.)

96. *Armhole length.*—For vests with sleeves, measured from point where sleeve is attached to shoulder to lowest point under arm. For sleeveless garment, measured from top point of shoulder at shoulder along outer edge of armhole to lowest point under arm. (From *F* to *N*, fig. 12.)

97. *Sleeve cuff length (if cuff is used).*—Measured from middle of seam attaching cuff to sleeve to upper outside edge of cuff. (From *L* to *G*, fig. 12.)

98. *Neck opening.*—For button chest garment, measured from center of collarete or neck opening to end of buttonhole. If garment is pullover type, measured from point where shoulder joins collarete or neck opening around inner edge of collarete or neck opening back to starting point.

TABLE 43.—Standard measurements for children's flat knit cotton vests—Built-up shoulder—High neck, long sleeve vest
(A. K. U. M. A. No. 37)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment (all gages) -----	10	11	12	13	14	15	16	17	18	6 per cent. 1 inch. Do. ¾ inch. Maximum. 1 inch.
Total length -----	17½	18½	20½	22½	24½	26	27½	29	31	
Sleeve length -----	10	11	12	13	14	15½	17	18½	19	
Armhole length -----	5	5½	6	6	6½	6½	7	7	8	
Sleeve cuff length (if cuff is used) -----	4	4	4	4	4	4	4	4	4	
Neck opening -----	14	14	15	15	15	16	16	17	18	

BUREAU OF STANDARDS

TABLE 44.—*Standard measurements for children's flat knit cotton vests—Built-up shoulder—Dutch neck, elbow sleeve vest*

(A. K. U. M. A. No. 37)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment (all gages)-----	10	11	12	13	14	15	16	17	18	6 per cent. 1 inch. Do. ¾ inch. Maximum. 1 inch.
Total length-----	17½	18½	20½	22½	24½	26	27½	29	31	
Sleeve length-----	6	6	7	7	8	8	9	9	10	
Armhole length-----	5	5½	6	6	6½	6½	7	7	8	
Sleeve cuff length (if cuff is used)-----	4	4	4	4	4	4	4	4	4	
Neck opening-----	17	18	19	19	21	21	23	23	25	

TABLE 45.—*Standard measurements for children's flat knit cotton vests—Built-up shoulder—Low neck, short sleeve vest*

(A. K. U. M. A. No. 37)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment (all gages).....	10	11	12	13	14	15	16	17	18	6 per cent. 1 inch. Do. ¾ inch. Maximum. 2 inches.
Total length.....	17½	18½	20½	22½	24½	26	27½	29	31	
Sleeve length.....	4½	4½	5	5	5½	5½	6	6	6½	
Armhole length.....	5½	6	6½	6½	7	7	7½	7½	8½	
Sleeve cuff length (if cuff is used).....	4	4	4	4	4	4	4	4	4	
Neck opening.....	27	28	29½	31	32½	34	35½	37	38½	

TABLE 46.—*Standard measurements for children's flat knit cotton vests—Built-up shoulder—Low neck, no sleeve vest*

(A. K. U. M. A. No. 37)

Location	Size (inches)									Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	36	
	Age									
	2	4	6	8	10	12	14	16	18	
Width of garment (all gages).....	10	11	12	13	14	15	16	17	18	6 per cent. 1 inch. ¾ inch. 2 inches.
Total length.....	17½	18½	20½	22½	24½	26	27½	29	31	
Armhole length.....	6	6½	7	7	7½	7½	8	8	9	
Neck opening.....	27	28	29½	31	32½	34	35½	37	38½	

CHILDREN'S RIBBED (1 BY 1) COTTON PANTS—ANKLE AND KNEE LENGTH

METHOD OF MEASURING

99. *Total length*.—Measured from outside edge of waist band to lower edge of leg. (From *A* to *B*, fig. 4.)

100. *Waist*.—Twice the distance between the outside edges of waist band when garment is buttoned. (Twice *A* to *C*, fig. 4.)

101. *Width across seat*.—Measured across back of garment at a point half-way between bottom of crotch and top edge of waist band. (From *K* to *L*, fig. 4.)

102. *Width of thigh*.—Measured across leg at bottom of crotch. (From *D* to *N*, fig. 4.)

103. *Front rise*.—Measured from bottom of crotch up front of buttoned garment to middle point of front edge of waist band. (From *D* to *G*, fig. 4.)

104. *Back rise*.—Measured from bottom of crotch up back of buttoned garment to middle point of back edge of waist band. (From *D* to *H*, fig. 4.)

TABLE 47.—Standard measurements for children's ribbed (1 by 1) cotton pants—ankle and knee length

(A. K. U. M. A. No. 36)

Location	Age									Tolerances (plus or minus)
	2	4	6	8	10	12	14	16	18	
Total length:										
Ankle.....	20	22½	25	27½	30	33	36	39	42	1 inch.
Knee.....	13	14	16	17½	19	20	21	22	23	Do.
Waist.....	23	24	25	26	27	28	29	29	29	Do.
Width across seat.....	13	14	15	16	17	18	19	20	21	Do.
Width of thigh (ankle).....	4	4½	4½	5	5	5½	5½	6	6½	6 per cent.
Front rise.....	9½	10	11	12	12½	13½	14½	15½	16½	¼ inch.
Back rise.....	10	10½	11½	12½	13	14	15	16	17	Do.

CHILDREN'S FLAT KNIT COTTON PANTS—ANKLE AND KNEE LENGTH

METHOD OF MEASURING

105. *Total length*.—Measured from outside edge of waist band to lower edge of leg. (From *A* to *B*, fig. 4.)

106. *Waist*.—Twice the distance between the outside edges of waist band when garment is buttoned. (Twice *A* to *C*, fig. 4.)

107. *Width across seat*.—Measured across back of garment at a point half-way between bottom of crotch and top edge of waist band. (From *K* to *L*, fig. 4.)

108. *Width of thigh*.—Measured across leg at bottom of crotch. (From *D* to *N*, fig. 4.)

109. *Front rise*.—Measured from bottom of crotch up front of buttoned garment to middle point of front edge of waist band. (From *D* to *G*, fig. 4.)

110. *Back rise*.—Measured from bottom of crotch up back of buttoned garment to middle point of back edge of waist band. (From *D* to *H*, fig. 4.)

TABLE 48.—Standard measurements for children's flat knit cotton pants—ankle and knee length

(A. K. U. M. A. No. 38)

Location	Age									Tolerances (plus or minus)
	2	4	6	8	10	12	14	16	18	
Total length:										
Ankle.....	19	21½	24	26½	29	32	35	38	41	1 inch.
Knee.....	12	13	15	16½	18	19	20	21	22	Do.
Waist.....	23	24	25	26	27	28	29	29	29	Do.
Width across seat.....	14	15	16	17	18	19	20	21	22	Do.
Width of thigh (ankle).....	5	5½	5½	6	6	6½	6½	7	7½	6 per cent.
Front rise.....	9½	10	11	12	12½	13½	14½	15½	16½	¼ inch.
Back rise.....	10	10½	11½	12½	13	14	15	16	17	Do.

CHILDREN'S SLEEPING GARMENTS—RIBBED AND FLAT KNIT

METHOD OF MEASURING

111. *Width of garment*.—Measured across garment 1 inch below bottom of armholes.

112. *Trunk*.—Twice the distance measured from point where shoulder joins collarette to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch gusset.

113. *Total length*.—Measured from point where shoulder joins collarette to toe of foot, garment laid out flat.

114. *Width of ankle*.—Measured across leg where foot is joined to leg.

115. *Width of leg*.—Measured across leg at a point 6 inches below bottom of crotch.

116. *Length of foot*.—Measured from toe to heel of bottom of foot after toe is folded back.

117. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve, or if cuff is used, to upper outside edge of cuff, cuff folded back over sleeve.

118. *Armhole length*.—Measured from point where sleeve is attached to shoulder to lowest point under arm.

119. *Collarette length*.—Measured from center of collarette button around lower edge of collarette to end of button hole.

TABLE 49.—Standard measurements for children's sleeping garments—Ribbed and flat knit

(A. K. U. M. A. No. 15)

Location	Size											Tolerances (plus or minus)
	0	1	2	3	4	5	6	7	8	9	10	
	Age											
	2		4		6		8		10			
Width of garment:												
Ribbed.....		9½	9½	10	10½	10½	11	11½	12	12	13	6 per cent. Do. 2 inches. Do.
Flat knit.....	11	11	12	12	13	13	14	14	15	15	16	
Trunk.....	36	37½	39	40½	42	43½	45	46½	48	49½	51	
Total length.....	29	31	33	35	37	39	41	43	45	47	49	
Width of ankle:												
Ribbed.....	3¼	3¼	3½	3¾	4	4	4¼	4¼	4½	4½	4¾	½ inch. Do.
Flat knit.....	3¾	3¾	4	4¾	4½	4½	4¾	4¾	5	5	5¼	
Width of leg:												
Ribbed.....	4½	4½	5	5	5½	5½	6	6	6½	6½	7	Do. Do. Do.
Flat knit.....	5	5	5½	5½	6	6	6½	6½	7	7	7½	
Length of foot.....	6	6	6½	7	7	7½	8	8	8	9	9	
Sleeve length.....	10½	10½	11½	12½	12½	14	14	15½	15½	17	17	1 inch.
Armhole length.....	5	5	5½	5½	6	6	6	6½	7	7	7	½ inch.
Collarette length.....	12	12	12	13	13	13	14	14	14	15	15	2 inches.

TABLE 50.—Standard measurements for infants' bands

(A. K. U. M. A. No. 14)

Location	Size						Tolerances (plus or minus)
	1	2	3	4	5	6	
Width of garment (all cuts).....	6	6½	7	7½	8	8½	6 per cent.
Total length.....	9½	10½	11½	13	14½	16	½ inch.
Shoulder strap width.....	1½	1½	1½	1½	1½	1½	½ inch.
Shoulder strap length.....	2½	3	3½	3½	3½	4	Do.
Armhole (circumference).....	8½	9½	10	10½	11	11½	½ inch.
Neck opening (circumference).....	16½	17	18	19	20	21	Do.

TABLE 51.—Standard measurements for infants' shirts—double breasted or button front

(A. K. U. M. A. No. 14)

Location	Size						Tolerances (plus or minus)
	1	2	3	4	5	6	
Width of garment (all cuts).....	6¼	6¾	7¼	7¾	8½	9¼	6 per cent.
Total length.....	10½	11½	12½	14	15½	17	½ inch.
Sleeve length (long):							
Straight.....	7¼	8	8½	9¼	10	10¾	Do.
Set-in ¹	7½	8	8½	9¼	10	10¾	Do.
Sleeve length (short):							
Straight.....	2½	3	3½	3½	4	4	¼ inch.
Set-in ¹	2½	3	3½	3½	4	4	Do.
Armhole length.....	3¾	4¼	4¾	4¾	5	5¼	½ inch.
Neck opening (circumference).....	9½	9½	10½	10½	11½	11½	Do.

¹ Sleeve lengths for set-in sleeves are the same as those for straight sleeve, since measurements for set-in sleeves are taken from bottom of armhole.

NOTE.—*Flap*.—Each flap of double-breasted shirts should extend the full width of garment from a point 1 inch below the armhole to the bottom of garment. (Fig. 7, p. 5.)

WOMEN'S RIBBED (1 BY 1) COTTON UNION SUITS—HIGH NECK, LONG SLEEVE, ANKLE LENGTH

METHOD OF MEASURING

120. *Width of garment*.—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 14.)

121. *Trunk*.—Twice the distance measured from point where shoulder joins collarette, to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch gusset. (Twice *C* to *D*, fig. 14.)

122. *Total length*.—Measured from point where shoulder joins collarette to bottom edge of leg or leg cuff if cuff is used. (From *A* to *B*, fig. 14.)

123. *Width of leg*.—Measured across leg of suit 6 inches below point *D* (fig. 14) and must equal one-half width of garment within tolerance of one-half inch plus or minus. (From *O* to *P*, fig. 14.)

124. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve or sleeve cuff if cuff is used. (From *F* to *G*, fig. 14.)

125. *Armhole length*.—Measured from point where sleeve is attached to shoulder to lowest point under arm. (From *F* to *N*, fig. 14.)

126. *Leg cuff length*.—Measured from middle of seam attaching cuff to leg to outside bottom edge of cuff if cuff is used. (From *K* to *B*, fig. 14.)

127. *Sleeve cuff length*.—Measured from middle of seam attaching cuff to sleeve to upper outside edge of cuff if cuff is used. (From *L* to *G*, fig. 14.)

128. *Neck opening*.—Measured from center of collarette button around inner edge of neck opening to end of buttonhole.

129. *Waist*.—Twice the distance measured across the garment at the narrowest part of the body of the garment. (Twice from *S* to *T*, fig. 14.)

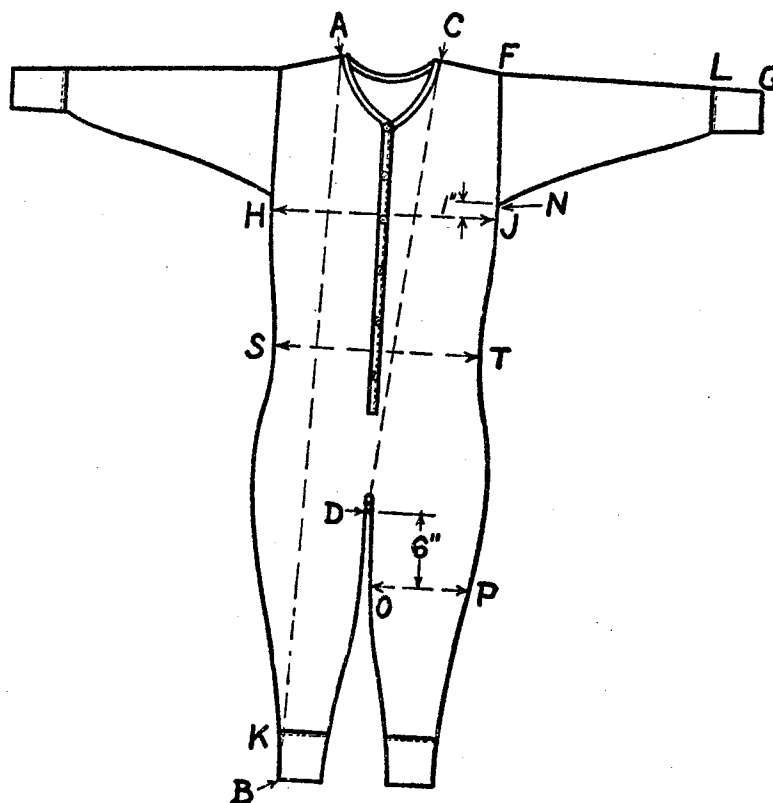


FIGURE 14.—Women's union suits, high neck, long sleeve, ankle length

TABLE 52.—Standard measurements for women's ribbed (1 by 1) cotton union suits—High neck, long sleeve, ankle length
(A. K. U. M. A. No. 100A)

(A. K. U. M. A. No. 100A)

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Width of garment:										
7, 8, 9, 10 cut	13½	14¼	15	15¾	16½	17¼	18	18¾	19½	6 per cent.
11, 12, 14 cut	13	13¾	14½	15¼	16½	17¼	18	18¾	19½	Do.
Trunk	62	64	66	68	70	72	74	76	78	2 inches.
Total length	53	54	55	56	57	58	59	60	61	2½ inches.
Width of leg:										
7, 8, 9, 10 cut	6¾	7¼	7½	7¾	8¼	8½	9	9½	9¾	½ inch.
11, 12, 14 cut	6½	7	7¼	7½	8	8¼	8½	9	9¼	Do.
Sleeve length	20	20	21	21	21	22	22	22	22	1 inch.
Armhole length	8	8½	9	9½	9½	10	10½	10½	11	Do.
Leg cuff length (if cuff is used)	6	6	6	6	6	6	6	6	6	Maximum.
Sleeve cuff length (if cuff is used)	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Neck opening (high neck)	18	18	19	19	19	20	20	20	21	1 inch.
Waist:										
7, 8, 9, 10 cut	23	24	25½	27	28	29½	31	32	33½	6 per cent.
11, 12, 14 cut	22½	23½	25	26½	27½	29	30½	31½	33	Do.

WOMEN'S RIBBED (1 BY 1) WORSTED, WORSTED-MERINO, WOOL AND WOOL-COTTON UNION SUITS—HIGH NECK, LONG SLEEVE, ANKLE LENGTH

(Made from fabric that has been washed in the roll and then cut and seamed)

METHOD OF MEASURING

130. *Width of garment*.—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 14.)

131. *Trunk*.—Twice the distance measured from point where shoulder joins collarette, to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch gusset. (Twice *C* to *D*, fig. 14.)

132. *Total length*.—Measured from point where shoulder joins collarette to bottom edge of leg or leg cuff, if cuff is used. (From *A* to *B*, fig. 14.)

133. *Width of leg*.—Measured across leg of suit 6 inches below point *D* (fig. 14) and must equal one-half width of garment within tolerance of one-half inch plus or minus. (From *O* to *P*, fig. 14.)

134. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve or sleeve cuff, if cuff is used. (From *F* to *G*, fig. 14.)

135. *Armhole length*.—Measured from point where sleeve is attached to shoulder to lowest point under arm. (From *F* to *N*, fig. 14.)

136. *Leg cuff length*.—Measured from middle of seam attaching cuff to leg to outside bottom edge of cuff, if cuff is used. (From *K* to *B*, fig. 14.)

137. *Sleeve cuff length*.—Measured from middle of seam attaching cuff to sleeve to upper outside edge of cuff, if cuff is used. (From *L* to *G*, fig. 14.)

138. *Neck opening*.—Measured from center of collarette button around inner edge of neck opening to end of buttonhole.

139. *Waist*.—Twice the distance measured across the garment at the narrowest part of the body of the garment. (Twice *S* to *T*, fig. 14.)

TABLE 53.—Standard measurements for women's ribbed (1 by 1) worsted, worsted-merino, wool and wool-cotton union suits—High neck, long sleeve, ankle length

(Made from fabric that has been washed in the roll and then cut and seamed)

(A. K. U. M. A. No. 101)

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Width of garment:										
7, 8, 9, 10 cut.....	13½	14¼	15	15¾	16½	17¼	18	18¾	19½	6 per cent.
11, 12, 14 cut.....	13	13¾	14½	15¼	16¼	16½	17¼	18	18½	Do.
Trunk.....	62	64	66	68	70	72	74	76	78	2 inches.
Total length.....	53	54	55	56	57	58	59	60	61	2½ inches.
Width of leg:										
7, 8, 9, 10 cut.....	6¾	7¾	7¾	7¾	8¼	8½	9	9¾	9¾	½ inch.
11, 12, 14 cut.....	6½	6¾	7¼	7¾	7¾	8¼	8½	9	9¾	Do.
Sleeve length.....	20	20	21	21	21	22	22	22	22	1 inch.
Armhole length.....	8	8½	9	9½	9½	10	10½	10½	11	Do.
Leg cuff length (if cuff is used).....	6	6	6	6	6	6	6	6	6	Maximum.
Sleeve cuff length (if cuff is used).....	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Neck opening (high neck).....	18	18	19	19	19	20	20	20	21	1 inch.
Waist:										
7, 8, 9, 10 cut.....	23	24	25½	27	28	29½	31	32	33½	6 per cent.
11, 12, 14 cut.....	22½	23½	25	26½	27½	29	30½	31½	33	Do.

WOMEN'S RIBBED (1 BY 1) COTTON UNION SUITS—DUTCH NECK, ELBOW
SLEEVE, ANKLE LENGTH, BUTTON FRONT

METHOD OF MEASURING

140. *Width of garment*.—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 14.)

141. *Trunk*.—Twice the distance measured from point where shoulder joins collarette or neck to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch gusset. (Twice *C* to *D*, fig. 14.)

142. *Total length*.—Measured from point where shoulder joins collarette or neck to bottom edge of leg or leg cuff, if cuff is used. (From *A* to *B*, fig. 14.)

143. *Width of leg*.—Measured across leg of suit 6 inches below point *D* (fig. 14) and must equal one-half width of garment within tolerance, one-half inch plus or minus. (From *O* to *P*, fig. 14.)

144. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve or sleeve cuff, if cuff is used. (From *F* to *G*, fig. 14.)

145. *Armhole length*.—Measured from point where sleeve is attached to shoulder to lowest point under arm. (From *F* to *N*, fig. 14.)

146. *Leg cuff length*.—Measured from middle of seam attaching cuff to leg to outside bottom edge of cuff, if cuff is used. (From *K* to *B*, fig. 14.)

147. *Sleeve cuff length*.—Measured from middle of seam attaching cuff to sleeve to upper outside edge of cuff, if cuff is used. (From *L* to *G*, fig. 14.)

148. *Neck opening*.—Measured from center of collarette button around inner edge of neck opening to end of buttonhole.

149. *Waist*.—Twice the distance measured across the garment at the narrowest part of the body of the garment. (Twice *S* to *T*, fig. 14.)

TABLE 54.—Standard measurements for women's ribbed (1 by 1) cotton union suits—
Dutch neck, elbow sleeve, ankle length, button front

(A. K. U. M. A. No. 102)

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Width of garment:										
7, 8, 9, 10 cut.....	13½	14½	15	15½	16½	17½	18	18½	19½	6 per cent.
11, 12, 14 cut.....	13	13¾	14½	15½	16½	17½	18	18½	19½	Do.
Trunk.....	62	64	66	68	70	72	74	76	78	2 inches.
Total length.....	53	54	55	56	57	58	59	60	61	2½ inches.
Width of leg:										
7, 8, 9, 10 cut.....	6¾	7½	7½	7¾	8¼	8½	9	9½	9¾	½ inch.
11, 12, 14 cut.....	6½	6¾	7¼	7¾	8¼	8½	9	9½	9¾	Do.
Sleeve length.....	10	10	10	10	11	11	11	11	11	1 inch.
Armhole length.....	8	8½	9	9½	9½	10	10½	10½	11	Do.
Leg cuff length (if cuff is used).....	6	6	6	6	6	6	6	6	6	Maximum.
Sleeve cuff length (if cuff is used).....	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Neck opening (Dutch neck).....	26	26	27	28	28	29	30	30	31	2 inches.
Waist:										
7, 8, 9, 10 cut.....	23	24	25½	27	28	29½	31	32	33½	6 per cent.
11, 12, 14 cut.....	22½	23½	25	26½	27½	29	30½	31½	33	Do.

**WOMEN'S RIBBED (1 BY 1) COTTON UNION SUITS—LOW NECK, NO SLEEVES,
KNEE LENGTH, BUILT-UP SHOULDER, TIGHT KNEE**

METHOD OF MEASURING

150. *Width of garment.*—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 15.)

151. *Trunk.*—Twice the distance measured from upper edge of shoulder straps to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch gusset. (Twice *C* to *D*, fig. 15.)

152. *Total length.*—Measured from center of shoulder straps to bottom edge of leg. (From *A* to *B*, fig. 15.)

153. *Armhole length.*—Measured from top point of armhole of shoulder along outer edge of armhole to lowest point under arm. (From *F* to *N*, fig. 15.)

154. *Neck opening.*—Measured around inner edge of neck opening.

155. *Waist.*—Twice the distance measured across the garment at the narrowest point of the body of the garment. (Twice *S* to *T*, fig. 15.)

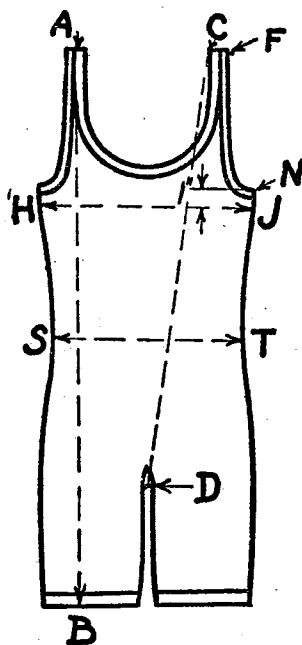


FIGURE 15.—Women's union suit, low neck, no sleeves, knee length, built-up shoulder, tight knee

TABLE 55.—Standard measurements for women's ribbed (1 by 1) cotton union suits—low neck, no sleeves, knee length—built-up shoulder, tight knee

(A. K. U. M. A. No. 103)

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Width of garment:										
7, 8, 9, 10 cut.....	12½	13¼	14	14¾	15½	16¼	17	17½	18	6 per cent.
11, 12, 14 cut.....	11½	12¼	13	13¾	14½	15¼	16	16½	17	Do.
Trunk.....	62	64	66	68	70	72	74	76	78	2 inches.
Total length ¹	40	41	42	43	44	45	46	47	48	1½ inches.
Armhole length.....	9½	10	10	10½	10½	11	11½	11½	12	1 inch.
Neck opening (low neck).....	40	42	43	44	45½	47	48½	50	51½	2 inches.
Waist:										
7, 8, 9, 10 cut.....	21½	22½	24	25½	26½	28	29½	30½	32	6 per cent.
11, 12, 14 cut.....	21	22	23½	25	26	27½	29	30	31½	Do.

¹ Total lengths of trunk and sport leg models will vary according to style with tolerance of 1½ inches plus or minus.

TABLE 56.—*Standard practice of spacing shoulder straps on women's bodice-top union suits and vests*

(A. K. U. M. A. No. 106)

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Front spacing between strap ends.	7	7½	7½	7¾	8	8¼	8½	8¾	9	½ inch.
Back spacing between strap ends.	6	6¼	6½	6¾	7	7¼	7½	7¾	8	Do.
Strap length.....	14	14½	15	15½	16	16½	17	17½	18	Do.

NOTE.—Spacing between ends of straps on front and back of garment is measured from inside edge of one strap to inside edge of the other strap. This measurement is taken after the garment is brought to the chest size.

**WOMEN'S RIBBED (1 BY 1) COTTON SHAPED VESTS—LOW NECK, NO SLEEVES,
BUILT-UP SHOULDER**

METHOD OF MEASURING

156. *Width of garment.*—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 13.)

157. *Waist.*—Twice the distance measured across garment at the narrowest part of the body of the garment. (Twice *S* to *T*, fig. 13.)

158. *Total length.*—Measured from top edge of shoulder strap to bottom edge of vest. (From *A* to *B*, fig. 13.)

159. *Armhole length.*—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm (one-half length of armhole band). (From *F* to *N*, fig. 13.)

160. *Collarett length.*—Measured from point where shoulder joins collarett around inner edge of collarett back to starting point.

TABLE 57.—*Standard measurements for women's ribbed (1 by 1) cotton shaped vests—low neck, no sleeves, built-up shoulder*

(A. K. U. M. A. No. 104)

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Width of garment:										
7, 8, 9, 10 cut.....	12½	13¼	14	14¾	15½	16¼	17	17½	18	6 per cent. Do.
11, 12, 14 cut.....	11½	12¼	13	13¾	14½	15¼	16	16½	17	
Waist:										
7, 8, 9, 10 cut.....	21½	22½	24	25½	26½	28	29½	30½	32	Do.
11, 12, 14 cut.....	21	22	23½	25	26	27½	29	30	31½	Do.
Total length.....	32	32	33	34	35	35	36	36	37	1 inch.
Armhole length.....	9½	10	10	10½	10½	11	11½	11½	12	Do.
Collarett length.....	40	42	43	44	45½	47	48½	50	51½	2 inches.

WOMEN'S RIBBED (1 BY 1) COTTON DRAWERS.—KNEE LENGTH, TIGHT KNEE

METHOD OF MEASURING

161. *Total length.*—Measured from outside edge of waistband to lower edge of leg. (From *A* to *B*, fig. 16.)

162. *Waist.*—Twice the distance between the outside edges of waistband when garment is buttoned. (Twice *A* to *C*, fig. 16.)

163. *Width across seat.*—Measured across back of garment half-way between bottom of crotch and top edge of waistband. (From *J* to *L*, fig. 16.)

164. *Width of thigh*.—Measured across leg at a point approximately 6 inches below bottom of crotch. (From *O* to *P*, fig. 16.)

165. *Front rise*.—Measured from bottom of crotch up front of garment to center of front edge of waistband. (From *D* to *G*, fig. 16.)

166. *Back rise*.—Measured from bottom of crotch up back of garment to middle point of back edge of waistband. (From *D* to *H*, fig. 16.)

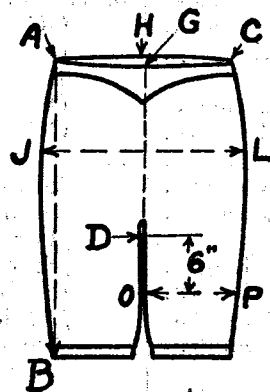


FIGURE 16.—*Women's drawers, knee length, tight knee*

TABLE 58.—*Standard measurements for women's ribbed (1 by 1) cotton drawers—knee length, tight knee*

(A. K. U. M. A. No. 105)

Location	Sizes (inches)												Tolerances (plus or minus)
	30	32	34	36	38	40	42	44	46	48	50		
Total length-----	26	26½	27	28	29	29½	30	30½	31	31½	32	1 inch.	
Waist-----	26	28	30	31	32	34	36	38	40	41	43	Do.	
Width across seat-----	15	16	17	18	19	20	20½	21	22	23	24	Do.	
Width of thigh-----	7½	7½	8	8½	8½	9	9½	10	10	10½	11	6 per cent.	
Front rise-----	14	14½	15	15½	16½	17	17½	18	19	19	19½	¾ inch.	
Back rise-----	16	16½	17	17½	18½	19	19½	20	21	21	21½	Do.	

RECOMMENDED SYMBOLS FOR DESIGNATING DIFFERENT MODELS

167. The following is a proposed system of standard symbols for designating different models or types of knit underwear to be used in marking underwear boxes. Symbols other than those proposed can be added from time to time as necessity arises.

168. Symbols shall be always given in the order of the groups as numbered. Thus neck symbols shall come first, sleeve second, length third, etc. The last group shall describe the class of garment other than regular. This may be the same as the manufacturers are using and should preferably be spelled out to avoid confusion. Symbols from each group, used in describing a garment, shall be separated by a comma, viz: HN, NS, AL/Stout. If more than one symbol from the same group is used in describing a garment, then they shall be used in the order that they are listed in each group, the first coming first, the second, second, and so on, the two or more symbols so used from the same group not being separated by comma—

for example, DN, NS, KL, SLWK (dutch neck, no sleeve, knee length, shell leg, wide knee).

- | | |
|--|---|
| <p>1. Neck:</p> <p>HN-----high neck.</p> <p>LN-----low neck.</p> <p>DN-----Dutch neck.</p> <p>VN-----V neck.</p> <p>RN-----round neck.</p> <p>TN-----tubular neck.</p> <p>AN-----athletic neck.</p> <p>2. Sleeve:</p> <p>LS-----long sleeve.</p> <p>SS-----short sleeve.</p> <p>NS-----no sleeve.</p> <p>ES-----elbow sleeve.</p> <p>WS-----wing sleeve.</p> <p>3. Total length:</p> <p>AL-----ankle length.</p> <p>KL-----knee length.</p> <p>$\frac{3}{4}$L-----$\frac{3}{4}$ length.</p> <p>$\frac{1}{4}$L-----trunk length.</p> <p>4. Leg types:</p> <p>SL-----shell leg.</p> <p>WL-----wide leg.</p> <p>WSL-----wide shell leg.</p> <p>TK-----tight knee.</p> <p>WK-----wide knee.</p> | <p>5. Finish:</p> <p>CF-----crochet finish.</p> <p>TS-----tubular finish.</p> <p>BT-----bodice top.</p> <p>EN-----envelope.</p> <p>6. Gussets:</p> <p>OG-----open gusset.</p> <p>CG-----closed gusset.</p> <p>DS-----drop seat.</p> <p>OS-----open seat.</p> <p>CC-----closed crotch.</p> <p>7:</p> <p>/Stout.</p> <p>/Slim.</p> <p>/For short men.</p> <p>/Short.</p> <p>/Stub.</p> <p>/Athletic.</p> <p>/Slender.</p> <p>/Tall.</p> |
|--|---|

RECOMMENDED UNDERWEAR BOX SIZES

(Outside Measurements in Inches)

169. 16 by $9\frac{1}{4}$, for men's ribbed union suits.

17 by $10\frac{1}{2}$, for men's heavy fleeced suits and fleeced shirts and drawers.

$12\frac{1}{2}$ by $9\frac{1}{4}$, for boys' and children's ribbed union suits.

$14\frac{1}{2}$ by $9\frac{1}{4}$, for boys' fleeced union suits and shirts and drawers.

13 by $8\frac{1}{2}$, for boys' fleeced union suits and shirts and drawers.

RECOMMENDED CONE COLORS FOR SINGLE COTTON YARNS

170. The following is a proposed system of designating single cotton yarn sizes by the colors of the cones upon which they are wound. Some knitting mills and some yarn mills have already adopted individual color codes and in order to avoid further confusion, this code has been adopted by the Associated Knit Underwear Manufacturers of America as a guide for mills wishing to standardize in this way.

Color of cone	Yarn sizes			
Gray-----	6s	12s	24s	70s
Drab-----	6.5s	13s	26s	
Dark green-----	7s	14s	28s	
Red-----	7.5s	15s	30s	90s
Blue-----	8s	16s	32s	
Light green-----	8.5s	17s	34s	
Orange-----	9s	18s	36s	
Black-----	9.5s	19s	38s	
Brown-----	10s	20s	40s	80s
Purple-----	10.5s			
Yellow-----	11s	22s		
Pink-----			50s	100s

RECOMMENDED METHOD OF WASHING

(Knit Wool and Wool-Cotton Underwear)

171. *Washing*.—Use only a mild soap that is free from excess alkali. If the soap is in powdered or chip form dissolve it first in hot water. Do not rub bar soap directly on the garment, but cut thin slices of it and dissolve as for chip or powdered soap. Soak the garment in warm water with enough of the soap solution to give a good suds for about one-half hour and then change to a clean bath of suds. Then press or squeeze the suds through the soiled spots until they are clean. Avoid rubbing on the wash board or between the hands as this is a sure way to shrink woolen underwear.

172. *Rinsing*.—Rinse thoroughly, once or twice if necessary, in clean warm water of approximately the same temperature as the washing solutions until all soap and dirt have been removed. Run through a wringer using only light pressure on the rolls or centrifuge. Lay the garment on a flat surface and stretch back to the original shape and size. Then hang it up by the top in a warm room or out of doors if the weather is warm and dry. Do not hang the garment out in freezing weather when drying.

173. Avoid sharp contrasts in temperatures while washing, rinsing, and drying. Dry slowly.

174. Remember not to boil or rub goods in washing and rinsing as this causes shrinkage.

175. The use of soft water increases the efficiency of the soap. If the water is hard, soften first by adding borax.

GENERAL CONFERENCE

176. Pursuant to a request of the Associated Knit Underwear Manufacturers of America, a general conference of producers, distributors, and users of knit underwear was held at the Bureau of Standards, Washington, D. C., on February 19, 1931, to consider the adoption of quality standards. The following individuals were present:

BLACK, JOHN, Textile World, New York, N. Y.
 BREGSTEIN, B., Bregstein Simon & Co., New York, N. Y.
 CHENEY, ROY A., Associated Knit Underwear Manufacturers of America, Utica, N. Y.
 CLEMENTS, E. A., Globe Knitting Works, Grand Rapids, Mich.
 FRANKE, Col. F. W., Bureau of National Homes, Washington, D. C.
 GROSNER, G. D., National Association of Retail Clothiers and Furnishers, Chicago, Ill.
 HAMLIN, CHARLES H., Associated Knit Underwear Manufacturers of America, Washington, D. C.
 JOHNSON, CONGRESSMAN NOBLE M., Washington, D. C.
 JONES, RALPH M., Utica Knitting Co., Utica, N. Y.
 LONG, Maj. E. C., United States Marines, Washington, D. C.
 LYONS, J. G., Journal of Commerce of New York, New York, N. Y.
 O'BRIEN, RUTH, United States Department of Agriculture, Washington, D. C.
 PAGE, W. NELSON, Lewis Jones Knitting Co., Winchester, Va.
 RALPH, HENRY D., National Retail Clothier and Furnisher, Washington, D. C.
 SAMPSON, Lieut. Col. O. H., Quartermaster Corps, U. S. Army, Washington, D. C.
 SCOTT, CLARICE L., American Home Economics Association, Washington, D. C.
 SPOONER, JOHN A., The Viscose Co., New York, N. Y.
 SPRINGER, WILLIAM E., United States Marine Corps, Navy Department, Washington, D. C.
 STUTZ, FRANK, Better Fabrics Testing Bureau, New York, N. Y.
 TEAGUE, JAMES, Daily News Record, New York, N. Y.

DEPARTMENT OF COMMERCE, WASHINGTON, D. C.

APPEL, WILLIAM D., Bureau of Standards.
 EMLEY, W. E., Bureau of Standards.
 FAIRCHILD, I. J., Bureau of Standards.
 GILBERT, L. R., Bureau of Standards.
 LAZO, M., Bureau of Foreign and Domestic Commerce.
 TILLMAN, S. F., Bureau of Standards.
 TRUNDLE, L. S., Bureau of Foreign and Domestic Commerce.

177. The conference was presided over by I. J. Fairchild, of the division of trade standards, who briefly outlined the procedure necessary to establish a commercial standard and called attention to the fact that the business done by the knit underwear industry in 1929 amounted to \$121,839,697.

178. Roy A. Cheney, secretary of the Associated Knit Underwear Manufacturers of America, gave a brief sketch of the infinite pains and trouble which the manufacturers and distributors had taken in order to be sure that the measurements and the methods of making these measurements correspond to trade demands. Mr. Cheney explained that the measurements are the result of technical and commercial research, that their accuracy is attested by the fact that every size in the proposed standard has been in actual use for several years and really expresses the best thought of the industry; that they were worked out and presented to the industry because their adoption will enable more intelligent buying on the part of the consumer, the jobber, and the retailer; that they tend to eliminate unfair competition by setting up a standard value with which merchandise may be compared, and by bringing about a better understanding and a better feeling in the industry.

179. The conference discussed the proposed commercial standard with the result that the following actions were taken:

1. To set aside the items of rayon underwear for action by a separate conference.
2. To change the title to read "Knit Underwear (Exclusive of Rayon)."
3. That the word "width" as applied to the measurement underneath the armhole shall hereafter be specified as "width of garment" and that this measurement shall be taken 1 inch below the armhole on all garments whether for men, women, or children. (Figures and descriptions to be changed accordingly.)

180. Upon motion by Mr. Cheney, seconded by Mr. Clements, the conference voted its unanimous approval of the recommended commercial standard as revised.

STANDING COMMITTEE

181. The conference voted to appoint a standing committee to consider the necessity for revision, and all suggestions pertinent thereto in order that the standard might be kept abreast of progress. The personnel of this committee is to be as follows:

ROY A. CHENEY, Associated Knit Underwear Manufacturers of America.
 RALPH M. JONES, Utica Knitting Co.
 E. A. CLEMENTS, Globe Knitting Works.
 GERALD GROSNER, The National Association of Retail Clothiers and Furnishers.
 L. P. BURKLAND, Wholesale Dry Goods Institute. National Retail Dry Goods Association.
 CLARICE L. SCOTT, American Home Economics Association.
 W. B. FRY, Bureau of Indian Affairs, Department of the Interior.
 Mrs. ARCH TRAWICK, General Federation of Women's Clubs.

REVISION INTERVAL

182. The revision interval for the standard was set at one year; that is, the standing committee will consider the advisability of revision annually in order that the standard may be kept abreast of progress and existing practices affecting knit underwear.

HISTORY OF PROJECT

183. About eight years ago the Associated Knit Underwear Manufacturers of America, feeling that the interest of the consumer is the first consideration of the manufacturer and in view of the desire to be of service to the consumer as well as the jobber and the retailer, began work on the collection of data looking toward the standardization of methods of measuring, measurements, and tolerances for knit underwear.

In order to get the very best service possible in developing the technical and scientific details incident to the standardization, a research associate in the person of C. H. Hamlin was established at the Bureau of Standards, Washington, D. C. Mr. Hamlin began his duties on July 26, 1923, and for seven and one-half years collected and tabulated essential data covering the measurements, tolerances, and method of measuring all types of knit underwear, in an effort to set up standard specifications for these garments that would be acceptable to all classes of the industry.

On December 31, 1930, the Associated Knit Underwear Manufacturers of America, conscious of the fact that the data assembled by Mr. Hamlin was sufficiently accurate to be used by all manufacturers as a specification in the manufacture of knit underwear, requested the cooperation of the Bureau of Standards in the establishment of a commercial standard.

On February 19, 1931, a general conference, composed of manufacturers, distributors, and organized users of knit underwear was held at the Bureau of Standards in Washington, D. C. Comments, criticisms, and suggestions were invited with the result that the conference voted that the measurements, tolerances, and other data relative to knit rayon underwear shall not be included in the knit underwear standard and that the title for this standard shall be changed to read "Knit Underwear (Exclusive of Rayon)."

On June 18, a circular letter to the manufacturers, distributors, and users of knit underwear (exclusive of rayon) announced the success of the project and indicated that since a satisfactory amount of signed acceptances had been received, the standard will be effective as of January 1, 1932.

EFFECTIVE DATE

184. (a) For new production. The conference voted to set January 1, 1932, as the effective date for new production.

(b) For clearance of existing stocks. There was no attempt made to set a date for the clearance of existing stocks.

CERTIFICATION PLAN

The conference voted its approval of the certification plan for application to knit underwear (exclusive of rayon) in accordance with the commercial standard.

The certification plan as applied by the Bureau of Standards to commercial standards consists in the compilation and distribution of lists of manufacturers who are willing, when requested to do so, to certify to purchasers that products supplied by them comply with all the requirements and tests set forth in nationally recognized commercial standards. The plan is also applied to selected Federal specifications.

These lists are available on request to individual consumers, consumer groups, companies, and, in fact, to any prospective purchasers, for their guidance.

The benefits now derived from the use of specifications by large consumers are thus made immediately available to the small consumer, with incidental advantage to the larger consumers of convenience in ordering and accepting material with fewer laboratory tests. The manufacturer also benefits from the well-known economies accompanying "mass production."

The lists of manufacturers "willing-to-certify" to the quality of certain commodities are made by corresponding with, as nearly as possible, all the manufacturers of that product and listing only those who signify their willingness to certify to the purchaser, when requested to do so, that the commodities delivered actually comply with the commercial standard.

Obviously, the purchaser making use of the lists of "willing-to-certify" manufacturers, will select therefrom such manufacturers as are known (or assumed) by him to be reliable.

The trend toward the purchase of materials of certified quality from sources shown on such willing-to-certify lists supplies added incentive to standardization on the part of other producers, and thus the benefits of the certification plan will be felt by purchasers either directly or indirectly, whether or not they make use of the plan themselves.

APPENDIX

COMMERCIAL-STANDARDS SERVICE

Industry has long sensed the need for a wider application and use of specifications developed and approved by nationally recognized organizations. To assist these bodies and the producers and consumers in securing this result and as a natural outgrowth of the movement toward elimination of waste through simplified practice, the Bureau of Standards has set up a procedure under which specifications, properly indorsed, may be printed as official publications of the Department of Commerce and promulgated as "commercial standards." This service parallels that of simplified practice in many respects, and is available only upon request.

Broadly speaking, the aim is to continue the same character of cooperative service in this field that is being rendered in simplification. The division of trade standards is not designed to act as a standardizing body, nor will it engage in the preparation of specifications. Its service is mainly promotional in character, since its chief mission is to invite attention to a standard or a specification which any branch of industry may want to promulgate on a nationwide basis; to determine its eligibility for promulgation; to publish and broadcast it in the event the prerequisites of procedure have been met, including a satisfactory majority acceptance; to facilitate the application of the certification plan for the assurance and convenience of the purchaser; to provide means for periodic audits of adherence; and to cooperate with the Bureau of Foreign and Domestic Commerce in determining the desire of industry relative to translation and promulgation of such specifications as a basis for foreign commerce.

In general, it may be said that a simplification covers types, sizes, and varieties of a commodity which are retained by industry on the basis of demand, whereas a commercial standard establishes definite requirements as to grade, quality, or dimensional tolerances in addition to any limitation of variety desired and accepted by the industry.

ORGANIZATION AND DUTIES OF STANDING COMMITTEE

In order to carry on the aims and desires of the industry in the standardization of their product, a standing committee is appointed at the general conference. This committee consists of members from each division of the industry, namely, producers, distributors, and consumers, and thus reflects the well-balanced viewpoint of all concerned.

The members of the committee receive all suggestions regarding the commercial standard and consider its revision in the event that such action is desirable and mutually beneficial.

If the commercial standard does not warrant revision, it is reaffirmed in its existing form, but if any important changes are found

desirable, their adoption is recommended by the committee, whereupon the industry is again solicited for written acceptance of the standard in its revised form.

The committee is in effect a centralizing agency for criticisms and comments regarding the commercial standard and is charged with the responsibility of recommending revisions to keep the standard abreast with current industrial practice.

The proper functioning of the committee requires that, when necessary, its members be willing to attend meetings held at some central place, although in many cases it will be possible to conduct the work by correspondence.

When any deceptions in reference to the commercial standard are reported to the standing committee, it applies moral suasion or such other corrective measures as seem desirable. The Department of Commerce has no "police power" to compel adherence, therefore, it is incumbent upon the standing committee to do all in its power to encourage all divisions of the industry to follow the provisions of the commercial standard and contribute in every way possible to its general adoption and usefulness.

YOUR COOPERATION

As a producer, distributor, or consumer of some of the commodities for which commercial standards have already been established, you are in a position to avail yourself of the benefits arising from the use of quality standards and incidentally to add impetus to this method of eliminating waste.

The first step is a declaration in favor of the standard by recording your intention to adhere, as closely as circumstances will allow, to the standards for those products which you may buy or sell.

The receipt of your signed acceptance will permit the listing of your company in new editions of the commercial standards that you accept.

You will, of course, want to examine any commercial standards before signing a formal acceptance. The Bureau of Standards will, therefore, furnish a copy of any standard under consideration for acceptance. A list of current commercial standards is given on the rear cover.

The publications may also be secured singly or in quantities at a nominal price from the Superintendent of Documents, Government Printing Office, Washington, D. C. Prices will be furnished upon request.

The acceptance of a commercial standard is an entirely voluntary action and applies to the production, sale, and use of stock items. It is not meant to interfere with the introduction, manufacture, or sale of special sizes and types sometimes required.

Trade associations and individual companies often distribute large numbers of the printed standard for the information and guidance of their members or customers. In such cases it is possible to extend the scope and degree of adherence by urging each recipient to send in an acceptance, bearing in mind that the practical value of any standardization is measured by the observance it receives.

An acceptance form for the commercial standard herein covered is included on page 45.

ACCEPTANCE OF COMMERCIAL STANDARD

Please sign and return this sheet to Division of Trade Standards, Bureau of Standards, Washington, D. C.

Date _____

DIVISION OF TRADE STANDARDS,
BUREAU OF STANDARDS,
Washington, D. C.

GENTLEMEN: We, the undersigned, do hereby accept the original draft of the commercial standard, as our standard practice in the { production ¹
distribution ¹
use ¹ } of knit underwear (exclusive

of rayon), beginning _____, and will use our
(Date)

best effort in securing its general adoption.

To permit intelligent review of the effectiveness of the commercial standard every year by an accredited committee of all interests, working in cooperation with the Department of Commerce, we plan to supply all data, upon request, which may be necessary for the development of constructive revisions. It is understood that any suggested modifications will be submitted as soon as formulated, and shall not be promulgated until accepted in form similar to this recommendation.

Signature _____

(Kindly typewrite or print the following line)

Title _____

Company _____

Street address _____

City and State _____

We are members of the following associations or other organizations interested in the production, sale, or use of knit underwear (exclusive of rayon):

¹ Please designate which group you represent by drawing lines through the other two. In the case of related interests, trade papers, colleges, etc., desiring to record their general approval, the words "in principle" should be added after the signature.

TO THE ACCEPTOR

In signing the acceptance blank, please bear the following points clearly in mind:

1. *Adherence.*—The Department of Commerce has no regulatory powers to enforce adherence to the commercial standards. Instead, this waste-elimination program is based on voluntary cooperation and self-government in industry. To make this specific standardization operate as a satisfactory example of self-government, it is highly desirable that it be kept distinct from any plan or method of governmental regulation or control. It will be successful according to the degree to which manufacturers, distributors, and purchasers adhere to its terms and conditions.
2. *The industry's responsibility.*—The department cooperates only on the request of the industry, and assumes no responsibility for industrial acceptance or adherence. This program was developed by the industry on its own initiative. Its success depends wholly on the active cooperation of those concerned.
3. *The acceptor's responsibility.*—You are entering into an entirely voluntary arrangement, whereby the members of the industry—the distributors and consumers of the product, and others concerned—hope to secure the benefits inherent in commercial standardization. Those responsible for this standard realize that instances may occur in which it will be necessary to supply or purchase items not included therein. The purpose is, however, to secure wider support for nationally recognized standards covering grade, quality, and other characteristics of products. Consumers can make the program a success if, in their purchasing, they will make a definite and conscientious effort to specify in terms of this commercial standard.
4. *The department's responsibility.*—The function performed by the Department of Commerce is fourfold: First, to act as a referee to insure adequate consideration of the needs of all interests; second, to supply such assistance and advice in the development of this program as past experience with similar programs may suggest; third, to solicit and record the extent of adoption and adherence to the standard; and fourth, to add all possible prestige to this standardization movement by publication and promulgation if and when it is adopted and accepted by all elements directly concerned.

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COMMERCIAL STANDARDS

CS No.

- 0-30. The commercial standards service and its value to business.
- 1-28. Clinical thermometers.
- 30. Mopsticks.
- 3-28. Stoddard solvent.
- 4-29. Staple porcelain (all-clay) plumbing fixtures.
- 5-29. Steel pipe nipples.
- 6-31. Wrought-iron pipe nipples (first revision).
- 7-29. Standard weight malleable iron or steel screwed unions.
- 8-30. Plain and thread plug and ring gage blanks.
- 9-29. Builders' template hardware.
- 10-29. Brass pipe nipples.
- 11-29. Regain of mercerized cotton yarns.
- 12-29. Domestic and industrial fuel oils.
- 13-30. Dress patterns.
- 14-31. Boys' blouses, button-on waists, shirts, and junior shirts.
- 15-29. Men's pajamas.
- 16-29. Wall paper.
- 17-30. Diamond core drill fittings.
- 18-29. Hickory golf shafts.

CS No.

- 19-30. Foundry patterns of wood.
- 20-30. Staple vitreous china plumbing fixtures.
- 21-30. Interchangeable ground glass joints.
- 22-30. Builders' hardware (nontemplate).
- 23-30. Feldspar.
- 24-30. Standard screw threads.
- 25-30. Special screw threads.
- 26-30. Aromatic red cedar closet lining.
- 27-30. Plate glass mirrors.
- 28-32. Cotton fabric tents, tarpaulins, and covers.
- 29-31. Staple seats for water-closet bowls.
- 30-31. Colors for sanitary ware.
- 31-31. Red cedar shingles.
- 32-31. Cotton cloth for rubber and pyroxylin coating.
- 33-32. Knit underwear (exclusive of rayon).
- 34-31. Bag, case, and strap leather.
- 35-31. Plywood.
- 36-31. Fourdrinier wire cloth.
- 37-31. Steel bone plates and screws. (In preparation.)

NOTICE.—Those interested in commercial standards with a view toward accepting them as a basis of every-day practice in their industry may secure copies of the above standards, while the supply lasts, by addressing the Division of Trade Standards, Bureau of Standards, Washington, D. C.